

Comment

Simplified price control at source on a proper basis needed

No one questions the sincerity of the gentlemen in OPA or their desire to stave off inflation. The ground swell of criticism of that body probably springs from its inability to fulfill an almost impossible task. So many remedies for the situation have been proposed that it is difficult to choose between them. Unless something is done it seems probable that present price policies and regulations are likely to drive many concerns, chiefly retailers, out of business. What is most needed perhaps is simplified price control at the source set up on a realistic basis which will not curtail production; and retail margins that will permit continuance in business.

WPB denies order to eliminate trade marks is planned

Once again that old rumor of an alleged standardization order to eliminate brand names and trade marks, curtail varieties, establish standard grades and styles and set up standard prices has cropped up to disturb the sleep of already harassed cosmetic manufacturers. Every government agency which has studied standardization is opposed to it. To set at rest any apprehension officials of the WPB and OCR have denied any such standardization.

A little frankness about what followed cosmetic control in England

It would be well for the leaders of the cosmetic industry in the United States to be on guard against the ultimate effects which have followed the rigid control of cosmetics in England. One result has been to reward the illegitimate operators and to penalize the legitimate ones.

Thus, one of the well known English manufacturers writes us in part: "All legitimate manufacturers feel very strongly that they are being penalized by present regulations and although the Chamber of Commerce, Perfumery Section, which speaks for the trade, has been doing all it can to get matters put right, the net result is that the cosmetic industry is in a mess.

"It is a long story, and one which, I am afraid, has not been told very accurately in America. . . . You do not hear the other side of the picture, particularly as it relates to the black market in cosmetics which has become so powerful that it is trying to legitimize itself for post-war competition with pre-war brands."

the American Perfumer and ESSENTIAL OIL REVIEW

C O S M E T I C S · S O A P S · F L A V O R S

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24 July, 1943

The American Perfumer

desiderata

Comment on interesting new chemicals developments and their application to cosmetics and toiletries.

by MAISON G. deNAVARRE

SUBSTITUTES

Many have claimed that by the time they get through the experimental work trying out a substitute, the material becomes scarce again. Well, there is one way to beat this and that is to buy a little "substitute insurance." This is what it is. When you run into a substitute that looks like it might work, get a couple of drums right off the bat, maybe more. If it doesn't work out, you will probably not have much trouble to get rid of it. If it does work, you'll have enough to go along for a while. Maybe you can't use it and get only half what you paid for it. The difference is insurance. It pays to be prepared. Remember Pearl Harbor?

COLD PERMANENT WAVING

It is not surprising that the cold permanent-waving method caught many manufacturers unawares. It was so comforting and easy to follow along the lines of established practice. Even when the chemical heating pad made its appearance, the industry had not done enough research on the technique so that operators could be sure of giving a good wave each time it was tried. The variables had not been determined. Causes of instability of pad or waving solution took a couple of years to straighten out (never completely) at a tremendous expense, much more than the research would have cost.

Now it is the same with cold waving. Everyone wants to get into it. Every-



body is trying to analyze everybody else's solution. Only one or two simple techniques have been worked out. Others are tremendously cumbersome. Operators fingers and fingernails are slowly being eaten away with some solutions. Those who know the composition of such solutions aren't telling anyone. And yet, if the basic knowledge of hair and the means of accomplishing minor changes in it without damage are known, it becomes a problem of finding the right things to do the job . . . and *that alone* is a task in war time. Cold waving is here to stay. Learn to do it right.

DENTAL ABRASIVES

The appearance of magnesium metaphosphate, calcium magnesium pyrophosphate, calcium pyrophosphate and magnesium pyrophosphate as producible chemicals, brings them to the front as possible abrasives in dental powders and tooth paste. All are fine white powders, though their abrasive index has not been determined as yet. The available limited quantities will be sufficient to do research work for post-war products.

PROTECTIVE CREAMS

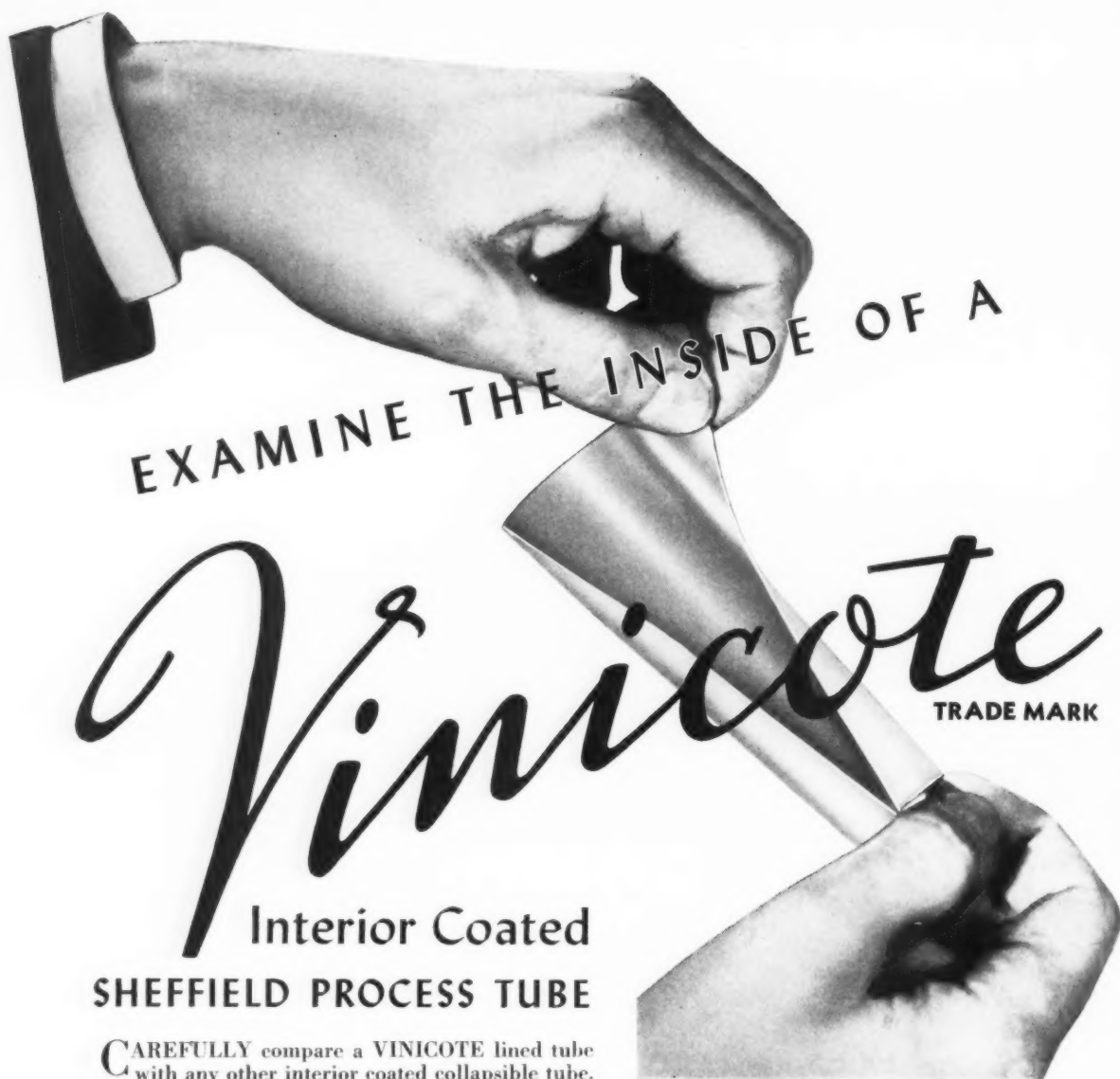
Two companies have printed elaborate booklets, each describing ten of their different protective products per company. That is a lot of foolishness. It would take an expert to know when which cream is to be used. Considerable duplication must exist. Why not just simplify the whole thing to from two to four creams? The average person can be protected from common industrial dermatitis by one well formulated cream. The balance will get all possible relief from one to three more creams. But ten creams; who is kidding whom? The article which appeared in the December, 1942, *AMERICAN PERFUMER* gives the different types of protection required. It also gives a lead on how to get that kind of protection. Two types of creams are suggested with variations.

FUTURE BULLETINS

It would be very helpful to us who write the *Bulletins* if some of our readers suggested topics for future *Bulletins*. We have some ideas of our own, but would like to get some outside remarks. As you know, the *Bulletins* are digests of existing materials used in certain cosmetic manufacture; such as, preservatives, emulsifiers, anti-oxidants or suntan preventatives. Each of these subjects has been treated in a special *Bulletin*, among other subjects. Do you have any ideas?

INSECT REPELLENTS

Once the war is over, this is going to be a big field which need not be limited to insecticide manufacturers. Right now, the very good repellents are going exclusively to the military, as they should. But once the military no longer need all the repellents, it is going to be a nice business. Of course, all repellents do not rate equally. Some are effective against house flies but not against mosquitoes, or vice-versa. Obviously, a good repellent will have to work against "bugs" in general. It will



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have to last several hours; should be nominally priced, in small bottles and large, non-greasy, as nearly odorless as possible and refreshing to apply.

FACIAL CAMOUFLAGE

At last the new tentative specification for Army facial camouflage has been published. It takes the item pretty much out of the hands of the individual manufacturer insofar as composition is concerned, but allows the individual maker figure out his own color blend, although there are suggested formulas that have been found acceptable. In other words, the only responsibility of the bidder for this business is to be able to follow instructions as to composition, and use his own knowledge to tell him how to mix the stuff together to get the desired product. Incidentally, the new tentative specifications call for a stick-type camouflage and not a cream.

The present tentative specifications were evolved after considerable effort had been expended. Much thought was given to portability, utility, effectiveness and stability. That is why a stick was decided upon . . . a stick divided in half, each half composed of different color. Thus some sticks to be called for will be half green and half loam; others will be half sand and half green; etc., and so on.

All this leads up to two things:

First, that the camouflage to be used henceforth by the Army (and maybe by other branches of the military) will be a stick, whose composition has been worked out by the Army and not by some one manufacturer.

Second, that no one manufacturer has dominated the field of facial camouflage for the military, in spite of the fact that one company recently ran a full-page advertisement implying as much and that it practically took their entire United Nations existing companies to devise the item. It is quite possible that the company in question got an order or two for cream camouflage. But they are not the only ones who have supplied the military with cream camouflage. Others have done a nice job, too, but did it like soldiers, quietly and dutifully rather than with fanfare.

With a fixed formula, everyone has an equal chance. From now on, it is your ingenuity that counts. But remember, that there are a lot of people not in the toilet-goods business who will undoubtedly also want to get this business (guess who?). It rightfully is in our field. Let us do everything to keep it in our field. The specification can be obtained from the Engineer Board, Fort Belvoir, Va., by writing to the Camouflage Section.

Questions and Answers

451. WATERPROOFING STOCKINGS

Q.: What information have you on waterproofing of cosmetic stockings? We will appreciate any information you can give us. Enclosed is a stamped envelope for reply. W. D. Indiana.

A.: Your question is one that might be asked by any manufacturer of cosmetic stockings and has been asked by a number of them. The only thing we can suggest is that you add such ingredients as are normally waterproof. For example, all the waxes, metal stearates, and most fatty acids are water repellent. These could be added to your product in any of a number of ways which will in part be determined by your formula. Naturally, the fats and waxes will be emulsified. The metal stearates will have to be wetted in some way and crowded in as pigments. These are all we can suggest at this time.

452. WAX FOR DEPILATORY

Q.: I have a formula for wax used in depilation. The preparation is used before treating the patient. It contains some purified titanium dioxide. I find that in the reheating process, the titanium dioxide makes the skin very red and frequently raises large white bumps on the skin. I am wondering if you could suggest some other white powder which would be non-irritating and harmless to the skin. E. S. Missouri.

A.: We assume that your wax consists probably of rosin and beeswax prepared with one or two other things beside the titanium dioxide. If such is the case, it is undoubtedly the rosin that is causing the irritation. Reheating beeswax should not do it. Titanium dioxide is inert and even under a reheating process, it would probably not react with the other ingredients. It takes very strong acids to dissolve it. Therefore, check the quality of your rosin. In this regard you might try one of the hydrogenated rosins which tend to less irritation than the regular.

453. COCONUT OIL

Q.: We are interested in producing an imitation coconut oil for flavoring and would appreciate your suggestions as to the chemicals used for this purpose. We understand that Aldehyde C-18 is used in conjunction with other chemicals, and we have not been able to learn the names and amounts of these other chemicals. W. G. Florida.

A.: We are sorry that our information on this subject is exceedingly limited. It is common knowledge that Aldehyde C-18 has a coconut character.

Whether it is used in coconut flavors we are not in a position to say. For further information Gildemeister and Hoffman in their Volume II on "The Volatile Oils" state that some of the volatile constituents of coconut oil are: Capronic acid, methyl nonyl carbinol, methyl heptyl carbinol, methyl heptyl ketone, methyl-N-nonyl ketone and methyl undecyl ketone. Whether these ingredients are used in coconut flavoring, we do not know. It is suggested that you contact some of the advertisers in the AMERICAN PERFUMER who supply flavors and flavoring chemicals for further information.

454. HAIR LACQUER

Q.: Please advise where you can obtain water-soluble resins and solubilized shellac for making hair lacquer. M. J. G. Maryland.

A.: Practically all of the water-soluble resins and the solubilized shellac are no longer available. We would suggest that you look up substitutes for these materials mentioned in the Replacements Bulletin and write to each respective supplier. This is a common problem today and we know of no good substitute at the moment.

455. MILK FACE CREAM

Q.: Will you please advise me where I can get a formula for making face cream with milk; that is, with milk added to the other ingredients. F.M.T., Calif.

A.: Ordinary milk spoils due to two factors; namely, the unsaturated nature of the fats and the presence of natural bacteria and ferments. While we have never prepared such a cream, it would seem that if you used dried powdered milk dissolved in water, it would work better. You also will have to use an effective preservative to prevent the product from spoiling by fermentation, molding or oxidation.

456. SKIN CLEANSER

Q.: We have heard of a French patent that gives a recipe for a foaming product for cleansing the skin. Can you locate this for us? M.N.C., New York.

A.: The foaming product to which you refer for cleansing the skin is found in Fr. Pat. 853,578. The product is obtained by adding to solutions of neutralized fatty acid derivatives of sulfonated, aliphatic, aromatic or hydroaromatic acid containing an oxy or amino group, such as isothionic acid or taurine, neutralized fats or acids of a high sulfonation degree.

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Marked Success in Simulating Natural Essential Oils

Methods employed by American perfumers to help solve war time difficulties . . . Imitations of needed essential oils . . . Reproductions will never entirely replace natural oils

by W. H. DUNNEY, JR.*

AT the outbreak of World War II, most of us, particularly those who experienced World War I and its many problems, were not too gravely concerned with the immediate future of the perfume industry in this country.

This was a European conflict and it was only natural to expect our importations of raw materials from this source would be affected. France, being an allied nation, was able to maintain her trade with us as she did during the last war. Therefore, our regular imports from her and her colonies would continue.

The manufacture of aromatic chemicals in this country, a development out of the last war, was another insurance against interruption of our steady flow of aromatic material.

SOURCES OF AVAILABLE OILS

South America, relatively at our own threshold, could always be counted on as a regular source for her important products.

Java and the East Indies were in friendly hands and to them we looked for an uninterrupted supply of the aromatic products these islands produced.

We naturally expected higher prices to prevail on all natural oils from abroad and anticipated some difficulty in obtaining some of them. Costs on domestic aromatics would undoubtedly increase slightly, but not to the extent they did in the last war when we were almost entirely dependent on the European markets for these materials. Then, too, our strict policy of neutrality was most reassuring to all of us.

Our first blow was felt in less than a year. France capitulated and with



Mr. Dunney, Jr., discusses substitutes

her fall our source of her vital raw materials ended abruptly.

REALIZATION OF WAR FOR U.S.

We, in this country were awakened with bone-shattering rapidity and many of us realized for the first time that eventually we would become involved in this war as an active participant.

In order to stave off or delay this, it became necessary to throw all our effort into war production for the allied nations until such time as we were prepared to take an active part ourselves. Guns, planes, tanks, ammunition, and hundreds of other vital war necessities had to be produced. To produce these implements of war it became imperative for our Government to put a priority use or limitation order on all chemicals and materials which entered into the manufacture of these products. The public in general

little realized the effect this would have on the perfume industry, but the manufacturers of aromatic bodies knew that these limitations would greatly handicap them and in many instances prevent them entirely from manufacturing. There is no point in naming the individual chemicals which were curtailed nor the products affected, but let it suffice to say many were necessary to produce our aromatic chemicals.

Consequently, there was a tightening effect on the markets of these products we so greatly depended upon. Some of them were entirely withdrawn by the manufacturer and those that were available soared in price. The market price of all the natural oils had already begun to rise by leaps and bounds, in many instances, so great as to make their use prohibitive in many preparations.

SEARCH FOR SUBSTITUTES

This was the second severe blow we had received and at this time headaches began to occur more frequently to the perfumer. The entire picture changed, relatively speaking, overnight, and it was evident that it was the opportune time to do something to replace some products which were no longer available.

Prior to the start of this war, many substitutes were being used, but only where a low cost was a paramount factor. Now every effort had to be devoted to producing a substitute which would actually replace its natural counterpart without radically changing the original character of the perfume.

The American perfumer, both energetic and competent began his task, with his bottles, scales, beakers, and smelling strips. He set forth on an

* Perfumer, Ungerer & Co., New York, N. Y.

undertaking which at the time seemed fantastic.

It has been said in the past, "That a substitute is only as good as the amount of natural it contains." This is not true today. Many recent developments of new aromatic bodies, in spite of the many restrictions, have made it possible to simulate some of the natural oils to such an extent that they not only actually replace them, but offer an improvement over them in a great many preparations.

IMITATION BERGAMOT A SUCCESS

Oil of bergamot, a very important oil from Italy used practically in all perfumes for all purposes, has not been imported since the beginning of the war. The available stocks in this country were quickly used up and the price soared from \$3 per pound to as high as \$35 per pound. Imitation bergamot was being used prior to the war but only to reduce costs. These imitations of pre-war days would not answer our present-day purposes. We had to produce a truer, finer imitation of that oil. This was accomplished and at present, imitation oil of bergamot is entirely replacing the natural oil, not withstanding the price of from two to three times the normal price of bergamot. The results are so satisfactory that it is doubtful if a great many users will ever resort to the natural oil again. Stocks of natural bergamot which are available are becoming old, and bergamot, being a citrus oil, will eventually deteriorate even if kept under ideal conditions for its preservation.

RESULTS WITH IMITATION OILS

The natural absolutes of jasmine, rose, orange flower, violet leaves, and tuberose, which are the most frequently used French floral oils, have also been reproduced with startling results. The American perfumers have gone "all out" in their attempt at these simulations. When the natural oils were available it was a comparatively simple matter to compound a synthetic jasmine or rose and top it off by the small addition of some of the natural. The closeness of the simulation was mainly determined by the amount of natural added to it. The perfumer was faced with a different problem—to produce a substitute without resorting to the use of the natural. This was a large order but to do otherwise would be meaningless as the available supplies of these natural materials were already limited if not exhausted.

It can be said assuredly, that their attempts have not been without a large measure of success. Today more than ever, the more successful imitations are being used with excellent results.

Their use is increasing and will continue. When the stocks of the natural oils are no longer available, the imitations will be used entirely.

YLANG YLANG SIMULATED

Oil of ylang ylang is another of the many essential oils which has been successfully simulated. The scarcity of this oil became acute and the price so exorbitant that its use was confined only to the finer extracts. Perfume odors for soap, face powders, talcs, and the less expensive toilet waters could not stand this high price. Here again, the perfumer produced a product which gave satisfaction without detracting from the original odor.

OIL OF LAVENDER ALSO SIMULATED

Imitation oil of lavender is still another achievement of the perfumer. It is replacing the natural lavender oil in perfumes for soaps, shaving creams, lotions, and many other cosmetic preparations. The Treasury Dept. has recently approved the use of some of these imitations as a denaturant for alcohol which formerly required oil lavender USP, thus allowing the manufacturers of household and germicide sprays to continue manufacturing their product without materially changing the odor.

As the supplies of natural civet and the oils of geranium, cananga, orris concrete, and many others which are used in relatively smaller quantities, became scarce, simulations of these materials were produced and are all finding their way in ever-increasing amounts in present-day perfumes.

Imitation oleoresin oak moss, a rather difficult undertaking, is also taking its place as a successful substitute. The heavy, rich, musty note of the oak moss has been reproduced in many of the better simulations and is giving excellent results as a replacement or is helping to extend the stocks of the natural resin.

NATURAL OILS NOT TO BE REPLACED

The post war period of adjustment is bound to see many changes in our industry just as it did in the last war. None of us in this country knows of the existing conditions of our industry in Europe or of the condition of the plants, the flowers, the trees, and the factories which distilled our oils. We have often wondered and discussed it. "How long after this war is terminated can we expect our normal supplies of raw materials from the countries which formerly produced them?" Most of us, when asked this question, shrug our shoulders and reply, "Your guess is as good as mine."

The task of replacing some of the

natural oils has been an undertaking well done. Other simulations are in the making which will prove equally as good as those already in use. In all fairness to Mother Nature, however, it must be said that as excellent as these reproductions are, they will never entirely replace the natural oils. This thought has been the farthest removed in the mind of the perfumer. We do not wish to make any rash claims nor have we any foolish hidden intentions of revolutionizing the industry to the extent that the use of natural essential and floral oils will no longer be necessary. We are merely trying to perpetuate the American perfume industry by the use of these substitutions until the present conflict has ended and we can very soon return once again to normalcy.

Substitute Skin Preparations

REPLACEMENT OF GLYCEROL IN SKIN PREPARATIONS. Cl. Bauschinger, *Fette u. Seifen* 48, 126-8 (1941). Glucose, hexite (mannitol-sorbitol soln.), propylene glycol, and glycerogen (I) are compared as substitutes for glycerol. (I) is prepared by reduction of glucose, sorbitol, starch, cellulose, peat, straw or sawdust. The sample of (I) used in the comparisons contained 40 to 42 per cent glycerol, 15 to 25 per cent propylene glycol, 20 to 30 per cent hexite, 6 per cent water and 1 to 4 per cent dihydric alcohols. The strong pressure on the outer cell layer of the skin exerted by glycerol is not as marked with (I).

The dihydric alcohols besides propylene glycol present in (I) and which are undesirable, can be removed by distillation. The pH of (I) which is between 8.4 and 8.5 can be brought to the neutral point when desired by phosphoric acid. (I) is most promising of the carbohydrate substitutes for glycerol. (C. A. 36)

Perfume Ingredient

PERFUME INGREDIENT. U. S. Pat. 2,265,437. A material of lily-of-the-valley odor is formed of hydroxycitronellal mixed with about 25 per cent or more of hydroxycitronellol to effect stabilization against air oxidation.

Aging of Perfume

ARTIFICIAL AGING OF PERFUME. Ger. Pat. 680,285. To hasten the aging of perfume, the alcohol, the water or their mixture used in the preparation of perfume is passed through a filter-like surface coated with an oligodynamic metal; e.g., silver.

A Vision of Service Realized—Brunswig Drug Co.

Inspired by the work of his father, a village doctor in a small French town, Lucien Napoleon Brunswig's ambition was to aid in the fight against sickness and disease

by FRED L. W. BENNETT

WHERE is there a true American who is not thrilled by a story of youth, born in obscurity and creates by his own faith, undaunted courage, ability and fair dealings a conspicuous and respected place for himself in the business world, winning the loyalty and esteem of an army of employees as well as the goodwill and confidence of thousands of patrons and of the entire community in which he lives and carries on his enterprise?

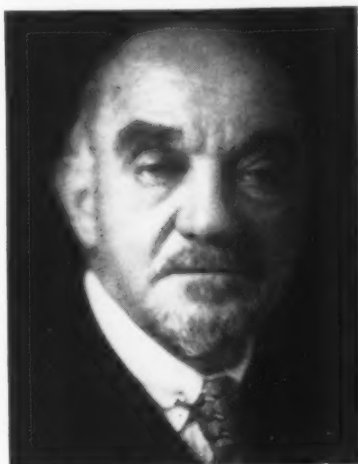
Many of our prominent executives began life with the proverbial silver spoon in their mouths, but one will find by digging into past histories that many others equally prominent have been architects of their own fortunes.

One is led to reflections of this sort when studying the life and work of the aged and respected founder of the well-known Brunswig Drug Company, Los Angeles, Calif., wholesale house, one of the largest independent wholesale drug concerns in the world. The achievements of its founder are the more notable because he was born in another land and had to overcome the additional handicap of a new language, new customs and new ways of doing things.

BEGAN AS APPRENTICE PHARMACIST

Although it does not claim to be more than 55 years old, the Brunswig Drug Company may be said to be the outgrowth of a little retail pharmacy opened in the year 1875 in the then small town of Atchison, Kansas, shortly after the twenty-first birthday of its owner, who had completed his drug store apprenticeship about 12 months before.

In 1871 a seventeen-year-old French boy by the name of Lucien Napoleon Brunswig answered the call of the New World. The young emigrant had no visions of becoming the owner of great ranches and plantations and mines, as many another Old Country boy sailing for our shores has had. Instead, inspired by the work of his father, a village doctor, his ambition was to do something in the fight against sickness



Mr. Brunswig, founder of Brunswig Drug Co.

and disease. Consequently when he arrived here he looked about for an opening in this field. He found that a drug store apprenticeship offered the best opportunity, and he soon apprenticed himself to a pharmacist in the Middle-West. For three years he made himself generally useful around the store, doing the menial work as well as helping to wait on customers—and at the same time cramming all the knowledge of drugs that he could. One of his jobs was to keep clean the cages of the rabbits, squirrels and other small creatures used as window attractions.

POSSIBILITIES IN CATTLE COUNTRY

At the termination of his apprenticeship, young Brunswig obtained a job as a prescription clerk in another store. His next move was to open a pharmacy of his own, the one referred to above. After a few years during which he lived frugally and saved as much money as he could, Mr. Brunswig began to look around for another location. Up to that time the railroad had not pushed farther west than Fort Worth, Texas, and he was shrewd enough to see that those living to the west of this community must ship their cattle from there and generally make

it their trading and merchandizing center. For this reason he moved his pharmacy to Fort Worth and established a small wholesale drug business in conjunction with it. Both prospered.

The Fort Worth move proved to be such a good one that young Brunswig attracted the flattering attention of the head of the Finlay Drug Company, an important wholesale drug concern in New Orleans. One day Mr. Finlay, who was aging, invited Mr. Brunswig to visit him. The upshot of the interview was the Finlay Drug Co. soon became the Finlay & Brunswig Drug Co.

Mr. Brunswig remained there for twenty years, taking over the entire business on the death of Mr. Finlay. In the meantime, however, with the aid of an able partner, F. W. Braun, who acted as manager, he opened a branch in Los Angeles. This was in 1887. Mr. Brunswig visited Los Angeles as often as he could. Early in the present century, deciding that the West Coast city was the greater field, he disposed of his New Orleans interests and moved to California, taking his place with his partner in the management of the Los Angeles firm. The Fort Worth drug store was sold to the H. W. Williams Drug Company, which later became the Fort Worth division of the Southwestern Drug Company. Not long after his arrival in Los Angeles, Mr. Brunswig made an extended trip to Europe. On his return, in 1907, he bought out Mr. Braun and changed the name of the business to Brunswig Drug Co.

COSMETIC DIVISION OPENED

Under the new manager, the company, which already boasted of a branch house in San Diego, now began to enter upon a period of expansion. The manufacture of a line of pharmaceuticals, proprietary medicines, a complete line of household remedies, a very large line of specialties, and cosmetics were undertaken. A large concrete building was constructed for the laboratory; a fixture factory was put up. Branches opened in Phoenix and

Tucson, Ariz., were among many advanced steps taken.

The company outgrew its laboratory in a comparatively short time and it was necessary to construct a new building. For years the Brunswig laboratories have been housed in a fine splendidly-equipped six-story reinforced concrete building located some distance from the general offices. In this building, in normal times, about 200 people are employed. It is the largest laboratory of its kind west of Chicago. The cosmetic department occupies the second floor and here a considerable volume of private label toiletries are turned out. Before the present war, these products, along with the other products of the company's laboratories, were shipped to markets as far distant as the Eastern States, the Hawaiian Islands and the Orient.

In addition to the laboratories in this building, there is a liquor department, the company's private printing department, and the carton and box factory, the latter being provided with production facilities for die-making, heavy-duty pressing for dieing of folding cartons, and the many machines used in the making of set-up boxes, including fancy hand-made boxes for face powders, toilet goods displays and so on.

ADOPTS SERVICES FOR RETAILER

The company employs between 50 and 60 salesmen, who contact the trade in California, Arizona and Nevada. All of these men, with the exception of two, are Brunswig trained. Sales conferences are held every other week. To show the firm's attitude toward the salesman, one has but to point to the education tour of the big eastern manufacturing centers which the sales force took in the summer of 1941 under the leadership of Vice-President and Gen-

eral Manager Harold E. Moore. There are about 680 people on the company's payroll. Until the present emergency, it maintained its own fleet of 25 delivery trucks, but today it is operating about 12, supplemented by the vehicles of commercial delivery concerns.

The Brunswig company has been a consistent supporter of the retailer, upholding fair-trade practices, maintaining a free employment agency and a retail drug store location department, handling escrows free of charge, giving generous assistance in business promotion, and aiding in other ways.

The success of this young French boy is due to combination of vision with other important qualities—a sincere effort to live up to the Golden Rule, courage tempered with shrewdness and sound judgment, the knack of picking the right men for key positions, a keen eye for wasteful practices, the capacity for hard work and a fine personality.

PREPARED FOR THE LEAN YEARS

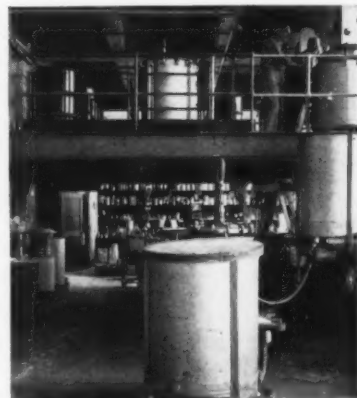
The great depression which followed the stock market crash of 1929 did not hit the Brunswig Drug Company as hard as it might have if the Brunswig's policy had not always been to prepare for a depression during prosperous times, especially when the prosperity took on the aspects of a boom. For this reason, during the lush twenties Mr. Brunswig kept in mind the slump which he felt certain would follow, and when it came he was prepared to meet it.

In spite of his own gifts Mr. Brunswig has always been the sort of top executive who was interested in the opinions of subordinates, realizing, as all able men do, that no one man has a monopoly on wisdom and knowledge. Quite capable of making up his own mind when the time came, he has not been afraid of being confused by a

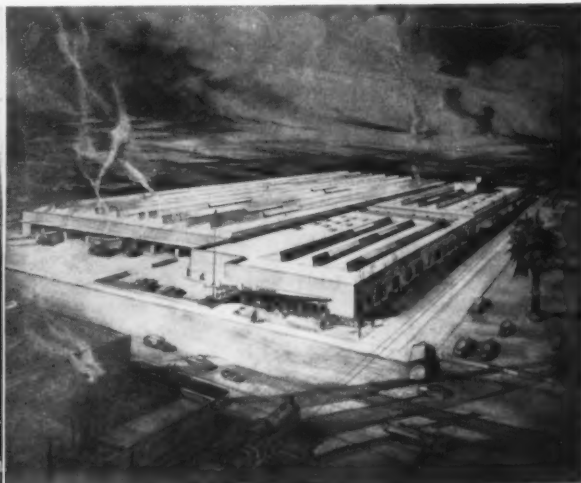
variety of opinions which differed from his own.

Many of the key men in the Brunswig organization have been with it continuously since they were boys. One of them, Archie E. Stone, pharmaceuticals and chemicals buyer, entered the service of the company 46 years ago and has been with it continuously since then.

Mr. Brunswig, in his relations with his employees, has always been a true democrat. Sympathetic, gracious and gifted with a judicial mind of a whimsical turn, he has never been unapproachable. Garden parties at his beautiful home in the city have been attended by employees of all ranks. As a host, Mr. Brunswig has the characteristics and the courtliness and charm of the cultured French gentleman. His relations with the druggists have always been of the most pleasant. Out of his broad experience he has been able to advise retailers to their great advantage, and there are many



Section of Cosmetic Dept. Left: T. G. Stone, asst. treas. Right: H. E. Miller head of dept.



LEFT: Building housing Brunswig Drug Co.'s laboratory. RIGHT: Plan of new Brunswig Drug plant when peace comes, now held up by war.

drug store owners in Southern California who have come to know him as a friend in need as well as a wholesale merchant and manufacturer.

Mr. Brunswig has always had varied interests. He has been a great and discriminating reader, a lover of art and sculpture, an amateur photographer, and a gardener, among other things. An excellent judge of art and sculpture, he has collected rare pieces while visiting the Old World.

During the first World War Mr. Brunswig was not merely a generous contributor of money to the various funds but he was a generous contributor of time as well. Thinking nothing of the dangers of ocean travel in wartime, he made more than one trip to his native land during the conflict as a representative of French relief societies in the United States.

For the past few years, Mr. Brunswig—now in his 87th year—has been inactive. Until the past few months, however, he has been able to counsel



with the company's executives and the business is being conducted on the lines laid down by him.

EXECUTIVES SERVE 147 YEARS

Mr. Brunswig is the father of five children, one son and four daughters.

The loyalty and goodwill toward Mr. Brunswig of the company's executives may be gathered from the fact that the combined services of the five present operating staff of officers totals 147 years. In order of service they are: Thomas G. Stone, assistant treasurer and general manager of the laboratory, 40 years; Harold E. Moore, vice-president and general manager, and Harry E. Lawrence, treasurer, each 30 years; Roy G. Redmond, secretary, 27 years; Roy G. Schwab, vice-president and merchandise manager, 20 years. Each one is also a director of the company, a closed corporation since its inception.

In the Los Angeles headquarters reposes blue prints of a new plant which



1. Section showing pharmaceutical manufacturing laboratory, Brunswig Drug Company.

2. Section of important box department of Brunswig Drug Co. Cutter and creaser is shown in action in this illustration.

3. General view of pharmaceutical packaging department. Henry L. Bonney who is shown standing farthest from the camera is in charge of this company department.

4. General view of a section of medicinal specialties department. Harold S. Manwaring in the picture is in charge here.

5. Laboratory building showing also section of company's large modern private printing plant. Man facing camera with head down is Verner A. Johnson, manager of this department and very highly regarded in his field. Entire plant is well equipped.

is designed to house all the operations of the firm. The plans embody a building 635 by 340 feet and one story in height, provided with conveyors throughout. Thoroughly streamlined and the last word in construction, the plant when completed will be one of the finest of its kind in the country. The company has purchased seven acres of land in anticipation of erecting this plant. Construction, of course, must remain in abeyance until the war is won.

Peppermint Oil Production

PEPPERMINT OIL PRODUCTION IN WASHINGTON. O. Johnson and J. C. Snyder. *Wash. Agr. Expt. Sta., Extension Bull.* 227, 8 pp. (1936). While freshly cut mint may be distilled for oil, it is much more economical to use the well-cured dry hay. Exposure to rain lowers the yield and quality. Harvesting is done when the plants are in bloom to obtain maximum yields of oil. The dry mint is steam distilled, the steam pressure being 40 to 100 lb. per sq. in. Tabular condensers are recommended for permanent installations on the basis of durability, compactness and efficiency; still, many simple worn condensers are used. The condensate is about 10 per cent oil. A properly designed separating can is of great assistance in the final collection of the oil and prevents formation of troublesome emulsions. Secondary stills are often used. The average time required to complete the distillation is about one hour. Redistillation removes such objectionable substances as dimethylsulfide, a colorless liquid boiling at 99 deg. F. and having a specific gravity just slightly less than that of oil of peppermint. In general, it is not profitable for the producer to redistil the crude oil. (C. A. 36).

Non-H₂S Depilatory

DEPILATORY. A patented white, non-drying depilatory which does not develop hydrogen sulfide when used is based upon a reaction of mercaptan carboxylic acid or its salts, with free alkali (*Fr. Pat.* 824,804). The quantity of alkali must be sufficient to give the product a pH of above 10. For instance, sodium dithioglycolate 2.5 is dissolved in water 20, to which is added slaked lime 5, and aluminum powder 0.2. The mixture is heated until the aluminum dissolves, and this solution is worked into 62.3 parts of a suitable cream base. (*J. Soap, Perf. & Cosm.* 14).

Dentifrice Compound

DENTIFRICE. *Ger. Pat.* 681,457, Aug. 31, 1939. To a standard dentifrice are added living non-pathogenic acid-producing bacteria, and some buffer substance which maintains a pH of 4.5 to 4.9. Suitable micro-organisms are *Lactobacillus acidophilus* and *Lactobacillus Bulgaricus*.

Hair Waving Device

WAVING HAIR. *U. S. Pat.* 2,274,170. A waving device is used, comprising a curling and setting pad of a single sheet of paper pulp and saturated with a treating solution, such as one of ammonium carbonate.

THE WAR PARADE OF ESSENTIAL OILS AND AROMATICS

As Compiled From Authoritative Market Sources

Third of a series. Japan attacked at Pearl Harbor. Ninety per cent of former sources of supply cut off. The industry pulls itself up by its bootstraps. Its war time service falters but never stops. This overall picture of the war's impact on the primary supply market will be continued in subsequent issues.

HARLAND J. WRIGHT,
Publisher

IN PRECEDING installments we mentioned the high prices of natural oils which became prevalent. Such prices were logically prohibitive and placed certain oils beyond reach for economic usefulness. This was due, of course, to the scarcity of genuine natural oils. Many houses husbanded their remaining stocks and turned to cheaper substitutes or to a modification of their former formulas. This temporary condition may be regarded as disadvantageous to the future of natural oils, as once the change is made and accepted by the public, manufacturers might well be averse to readjusting formulas again.

But it must be remembered that the public in war time was and still is being educated to be tolerant and not overly critical; in fact, to be glad that something near the usual product both in quality and volume is obtainable. That is the win-the-war spirit which in these ration-bedecked days the public is showing.

However, no one with experience in this industry extending over a ripe period of time would argue that any synthetics or substitutes, however surprisingly pleasing they may be and though representing technical achievements of great merit, would or could wholly supplant the natural oils in quality perfumes and perfume oils. Compounds now using some extended materials and aromatic isolates must have some oils in their composition and the finer the oil the better the compound.

When post-war normal trade again becomes possible manufacturers will again compete for leadership in the production and marketing of superior and quality products. The public with money in its pockets will again want and insist upon better quality products. Manufacturers will then use the natural oils in the building of these quality prod-

ucts to higher standards provided that these oils are again obtainable at practical economic prices.

Rose at \$35.00 per oz., Geranium at over \$20.00, and Ylang at \$17.50—these prices preclude their use in anything other than extremely limited volume. It would be but a fraction of former quantities; in fact, a very small per cent. To be again widely used as in the years prior to 1939, prices of these oils would necessarily have to be comparable to past years when volume was enjoyed and quantities absorbed by the American market.

AROMATIC ISOLATES STRONGLY ESTABLISHED

Nor would the outstanding accomplishments in the production of synthetics and aromatic isolates be adversely affected. The demand for aromatic products is ever broadening in America with the development of new materials such as plastics, textiles, artificial leathers and many others, all making use of aromatic products to cover objectionable odors to make the articles attractive to the public.

War-time developments in the soap, pharmaceutical, food and beverage industries assure a tremendously wider and more varied use of perfume compounds; also flavors, which have already drawn heavily upon the laboratories and productive facilities of those making synthetics and aromatic isolates. The indications are that the starved, depleted and dislocated civilian economy throughout the world will insure an era of quantity production in these lines and higher standards of production in an ever broadening market for American manufacturers in supplying the wants of other countries.

SUPPLY HOUSES AND MANUFACTURERS COOPERATE

The work of the essential oil laboratories, in those critical months and years, had another whole-



One of the many luxuriant rose fields throughout Bulgaria.

some effect. It brought essential oil houses and manufacturers into much closer relationship; it fostered cooperative spirit and practices much greater than ever before; it created an atmosphere of understanding for the common mutual problems; it resulted in confidence.

The attitude of the manufacturers throughout that period was tolerant indeed. The difficulties of the essential oil houses were, in fact, numerous. Most of them had, in past years, developed a large compound business, supplying the market with many thousands of individually designed compounds. With half of the raw materials no longer available, it was almost a miracle that they still succeeded in supplying perfume and flavor compounds with merely slight differences in odor and taste from those of pre-war days.

Only an expert can realize what tremendous experimental work this problem involved for the laboratories of the essential oil houses. Under normal conditions, they are equipped to fill daily, dozens, if not hundreds, of orders for compounds. But now it became necessary to make up a sample for each order, compare it with the old product and adjust the new formula accordingly. Adjusting and readjusting, modifying, submitting samples to the customer for approval—and by the time his answer came through, other raw materials were lacking, requiring to do the job all over again. It drove many a chemist almost to despair; it seemed like the task of *Sisyphus*—endless, useless.

Fortunately, most manufacturers showed full appreciation for the difficulties of their suppliers. In normal years to come, more than one will remember the excellent services rendered by the supply houses during that difficult period. Friendship and confidence in such days count more than mere profits in dollars and cents. For the essential oil dealers it was not a matter of selling at highest prices to the highest bidder; the problem was to allocate existing stocks and let the many customers share in what was still available. At that time, government control of stocks and prices was still in its infancy and our industry exercised its own sound judgment of how to supply the market to the greatest benefit of all.

PEARL HARBOR BLOW HITS THE INDUSTRY

Thus, the months passed from 1940 to the fatal day of December, 1941, when Japan attacked Pearl Harbor, and subsequently all but forcing us and our allies out of the Pacific and the essential oil, drug and spice industry out of business. It was the worst blow that our trade ever suffered. Within a few weeks, the Allies lost the Philippines and British Malaya; the access to China was cut; the priceless spice islands of Dutch Malaya had fallen into the hands of Japan; India and Australia were menaced; the white man was driven out of East Asia.

It was a loss so stunning, so far reaching in its consequences, that more than a stout heart was required to retain hope. The situation for our industry seemed almost a catastrophe. Looking at the picture in its true light, the United States was then almost completely cut off from most of its former supplies. We were isolated, in the worst sense, except from Central and South America, countries which had been but little developed as raw material producers for our North American industries.

The new situation affected not only essential oils, but also aromatic isolates, and spices and drugs in general. To visualize briefly the technical problems that are individually presented, please note that Japanese and Chinese menthol and especially camphor oil, the starting material for many synthetics, was no longer available; gone were star anise and cassia oil from China and French Indo-China, gone patchouly, vetiver and cananga from Malaya. Oil of citronella from Java, the basic material for the making of synthetic menthol, citronellal, hydroxy citronellal, citronellol, geraniol and the corresponding esters had fallen into the hands of Japan. The Malayan spice islands, with their fabulous wealth, their nutmeg, mace, pepper and cubeb production had become a monopoly of Japan. Europe and the French Colonial Empire were still controlled by the Axis or by Vichy France.

SUPPLY SOURCES SHRINK ALARMINGLY

Taking stock in these somber days—spring months of 1942—the United States could import eucalyptus oil from Australia, sandal, lemongrass, palmarosa and a few spices from British East India, cloves from Zanzibar, bois de rose, linaloe, sweet orange and guaiac wood oil, tolu, peru, styrax and some vanilla from Central and South America. The West Indies could still supply lime, pimento and bay oil. In Europe, only Spain had remained open and kept shipping oil of rosemary, spike lavender, thyme, origanum and wild marjoram but only in much reduced volume. The domestic production of the United States comprised citrus oils in California and Florida; peppermint, spearmint, dill and a few others in the Middle West; turpentine, cedar wood, sassafras, wintergreen and sweet birch in the East. A pitifully small list, indeed, compared to the hundreds of essential oils and spices which, in pre-war days, had come freely from every corner of the World.

(Continued in August issue)

Short Adages

by R. O'MATTICK

PAT CHOULI'S post-war ambition is to have his company open up a branch office in Shan-Gri-La or Bali or some such place, and put him in charge of it.

Dr. Rowmaterial says his post-war ambition is to have a dozen or so salesmen waiting outside for three or so hours and then send word that he is tied up for the rest of the week.

Otto Stock's p.w.a. is to tell everyone who calls on the 'phone: "Sorry, but we have everything we want, right now." And our own post-war wish is to get this Column syndicated so that it will appear in all the Perfume & Essential Oil Journals throughout the world!

* * *

Ye Cheerful Markets Reporte

While Oil of Bay is climbing uphill
Juniper Berry goes up at the close;
Menthol production is at a standstill
And firm in the market is Oil Bois de Rose.

But a fig for Juniper, Menthol or Bay—

The oils we needed were shipped to-day!

* * *

Six days a week we worry our brain—
Plastics for closures, caps for our jars;
Boxes are getting more hard to obtain—
All commandeered in the service of Mars.

But what care we about this delay—
The bottles we ordered came in to-day!

* * *

Mr. Goodbuy's office-boy defiantly told his boss that he did *not* go to his grandmother's funeral last week. He took his grandmother, who was brought up in Brooklyn, to see the Dodgers down the Boston Braves with two runs in the ninth.

* * *

Do you recall how skeptical some people were, not long ago, when toilettries-for-men first appeared on the market? Yet they are going stronger than ever. Sand L. Wood is talking about liquid socks to go along with liquid stockings and we daren't laugh for fear that any day now liquid socks will be in the Fifth Avenue windows. We confess that we were one of those who laughed at anti-sunburn creams and anti-sunburn lotions about ten years ago. And did we get burned up when a fellow from down South asked us to advance him a few hundred dollars so that he could go into the anti-sunburn business. In those days he had a pale and hungry look but now he has gathered so much gold that the solarium at his country estate is one

of the show places for miles around. He leaves for Florida about the middle of November and returns sometime in May with the most beautiful coat of tan we ever saw. He admits that he never uses any of his company's anti-sunburn preparations—he actually thinks they work—and they do!

* * *

Dr. Rowmaterial's secretary, June Ippère, dug up some old letters from the files, in which divers suppliers wrote in to thank the Doctor for various orders, additional business, etc. They have been framed and hung up in his office to remind him of the good old days.

* * *

Some salesmen we know, who always wanted to be buyers and sit around at a desk, looking important, knocking products and prices, criticizing suppliers and in general having a devil of a good time, are now resident buyers! They have had their wish and what a devil of a time they are having, but none of it is good.

* * *

We wonder how many of our readers, a goodly number of whom consult Poucher's Treatise on Perfumes and Cosmetics (3 vols.) know that Mr. Poucher is also the author of two excellent books on Photography. We had the pleasure the other day of examining in Dr. Rowmaterial's library a copy of one of these—"Snowdonia Through The Lens." It combines technical matters on photography with descriptions of mountain wanderings in Wildest Wales. Sixty-two magnificent photo-

graphs, taken by the author, are included. The texture of the snow on the mountains is so real that we felt cold in spite of the June weather and the warm cocktails in Dr. Rowmaterial's library. We are happy that Mr. Poucher is an expert on Perfumes and Cosmetics, otherwise we would have no just reason for writing about his travel books in this column. Since this is in the nature of a belated review, we trust he will send us a copy for nothing could persuade the Doctor to let us "borrow" it from his library.

* * *

"Why," asked Dr. Rowmaterial's bright grandson, "does Grandpa always talk about troubles with raw materials and never with cooked materials?"

* * *

One thing we are seldom short of is paragraphs for this column, least of all during the summer season. Soon Dr. Rowmaterial, Otto Stock, Mr. A. Goodbuy, Pat Chouli, Sand L. Wood, June Ippère and all our other friends and contributors will be off on their vacations and that is the time they are most likely to turn their creative minds towards writing this or that for SHORT ADAGES. In fact, Dr. Rowmaterial is off on an early start and we can already picture him sitting under an old apple tree somewhere in Vermont with his silver pencil (compliments of the Vetivert Corp.), his writing pad (compliments of Pat Chouli's firm) and his supply of scotch (compliments of another supplier) writing reminiscences from his vast store of experiences. Any day now the postman will bring some gems from his pen.



"I tell you, J. B., they won't let us call it night cream any more; we have to call it 'Evening Top of the Bottle.'"

British Essential Oils Importation and Distribution Plan

A scheme involving Lend-Lease and foreign oils in effect July, 1943 . . . Also Empire oils from producer to manufacturing user . . . Plan replaces Board of Trade import license quota system

by OUR BRITISH CORRESPONDENT

A SCHEME regulating importation and distribution of essential oils in Great Britain and/or Northern Ireland has been in the making for several months and becomes operative as of July 1, 1943. It has been formulated by an Advisory Committee consisting of importing and distributing interests with a representative from associations of the following industries: Sugar, confectionery, cocoa and chocolate, soft drinks, soap makers, essence manufacturers and drugs. The whole plan is under the authority of the Ministry of Food and is being administered by an Allocations Control comprising an independent firm of chartered accountants (who receive all confidential particulars) and the Advisory Committee. The Ministry also is represented.

CERTIFIED RETURNS ON 72 OILS

Certified returns are being called for from importers and distributors of the quantity of each of seventy-two natural essential oils imported and also landed in the datum period; i.e., the two years ended August 31, 1939, but this does not imply that all the oils listed will be imported. Terpeneless oils are not concerned. It seems from the annual review for 1942 of the Essential Oil Importers' Section of the London Chamber of Commerce (who have collaborated throughout with the Ministry in this matter) that originally the Ministry in proposing a scheme that was to replace the Board of Trade's import license quota system, confined the idea to ten oils of types to be imported under Lend-Lease but later extended them to cover all imported essential oils despite the view, strongly expressed by the Section that it would be impracticable to operate so detailed a scheme for the great variety of oils normally imported. However, the scheme has now been completed and it aims among other things at distributing the oils available among the consumers by block allocations to super-



View of one of England's busy docks where essential oils are among the many necessary imports.

visory bodies representing each consuming group.

ALLOCATION OF OIL IMPORTATIONS

Oils obtained through Lend-Lease channels will be imported by the Ministry of Food and where practical and appropriate will be passed through Allocations Control to traders who imported them in the Datum Period equal proportionately to their then imports, each oil being considered separately.

As regards British Empire sources the Ministry will from time to time notify the governments of the producing countries of the maximum quantity of each oil for which import licenses may be issued in respect to the countries they represent. Those governments will be asked to divide the quantities among their producers or shippers. The latter will inform their Approved Representatives in Great Britain and the Ministry will recommend import licenses of the same if the prices are reasonable. Each transaction will

be the subject of a contract between the producer or shipper and the approved Representative.

The Ministry in conjunction with the Advisory Committee will ascertain possible supplies from foreign sources and decide the quantities to be imported and importers will follow similar procedure as for Approved Representatives for empire shippers. Any other overseas oils coming into the possession of Government Departments, the Admiralty Court Prize Fund, etc., will be placed at the disposal of Allocations Control.

DISTRIBUTION IN APPROVED TRADES

The Ministry will determine the proportions in which each oil is to be divided among various approved using trades and each supervisory body the annual allotment in pounds for each user-member. Each user will nominate one (sometimes more) supplier through whom to receive his allotment. When each supervisory body has re-

ceived a complete list of suppliers nominated by users it will provide Allocations Control and each supplier with a list of users by whom each supplier has been nominated and the annual allotments of each of them. Allocations Control will ascertain whether all of the nominated suppliers were distributors of that oil during the Datum Period; any who were not, must nominate someone who was and draw the nominated quantities from him.

On receiving advice of individual shipments, the Approved Representatives (or the Ministry for Lend-Lease oils) will give quantities, varieties and prices to Allocations Control. The latter will then make allocations from each shipment to the Datum Period distributors in proportion to their nominations of that particular oil and will issue buying permits, advising them of the specific trade group to which each oil is to be supplied. Each buying permit will be endorsed with the name of the appropriate Approved Representatives. The Datum Period distributors will immediately present their buying permits to the Approved Representatives. Standard forms of contract at the authorized c.i.f. price will then be passed between the A.R.'s and the D.P.D.'s.

HOW PRICES ARE COMPUTED

The authorized c.i.f. price will be made up as follows: (a) The authorized cost and freight price paid by the A.R. plus (b) the actual cost of insurance plus (c) the A.R.'s authorized margin plus (d) the fixed contribution to cover the cost of the administrative scheme.

The appropriate documents of a shipment will be presented by A.R.'s to D.P.D.'s who will pay cash on first presentation on c.i.f. terms. If an A.R. normally delivers documents through a broker he shall continue to do so. A.R.'s who hold import licenses will arrange for Customs clearance. The D.P.D. will arrange for the goods to be landed, sampled and where necessary tested and approved in accordance with the normal trade practice. A delivery order may only be issued by the A.R. for original packages and any balance of oil not distributed must be held at Allocations Control's disposal. The D.P.D.'s will take delivery from the A.R.'s in original packages and will be responsible for supplying, on a *pro rata* basis, the users and suppliers by whom they have been nominated, breaking bulk wherever necessary. A standard form of contract, which will include all authorized expenses incurred from c.i.f. to delivered buyer's warehouse as well as the D.P.D.'s remuneration will be passed between D.P.D.'s and users. No participant in

the scheme who, having taken delivery of an allocation, finds it to be in excess of his authorized requirements may sell or otherwise deal with such excess except by written authority from Allocations Control. Price margins at all stages will be determined by the Advisory Committee in agreement with the Ministry.

BUFFER STOCK

So that equitable distribution may not be disturbed by loss at sea, enemy action, etc., firms with facilities would be invited to hold a portion of a buffer stock on certain terms.

Participants in the scheme for more than determined minimum amounts will have to assign an undertaking to be bound by the terms of the scheme. Breach of such undertakings will be reported to the Ministry.

The scheme is to remain in operation for one year and such further period as may be agreed between Allocations Control and the Ministry. All purchases of essential oils from abroad on and after July 1, 1943, and all oils imported under licenses which have been issued conditional upon the goods being distributed under the direction of the Ministry of Food will come within the operation of the scheme.

The chairman of the Advisory Committee is a gentleman known and esteemed by personal and hereditary association with the American market, Mr. A. T. Wheeler of Wheeler & Huisking Limited, London. With him, among others are: Mr. J. R. A. Evans (Wilson & Mansfield Limited) Mr. L. Naumann (W. Naumann), Mr. W. A. Ennever (R. C. Treatt & Co. Ltd.) and Mr. C. Howe (Paines & Reid) who represent the London Produce Brokers' Association. Of the user trade association, Mr. Cecil Bush (W. J. Bush & Co., Ltd.) represents The British Essence Manufacturers' Association.

Britain's Cosmetics Report

In a recent report received by the Department of Commerce from the London Chamber of Commerce, under the economic and financial review there is a section on cosmetics. It follows:

"At the beginning of the war the Board of Trade felt that cosmetics were among the articles of civilian consumption which could easily and rightly be dispensed with in war-time. The growing part of women in the war effort, however, soon made it appreciate the part that a good appearance played in morale. Significant of its appreciation are its successful efforts to make utility clothing attractive; the comparative protection afforded by Mr. Bevin to the staffs of hairdressing establishments in his recent withdrawal of labor from re-

tail trades; and the fact that cosmetics are on sale in factory canteens, and NAAFI (British equivalent of Post Exchanges) stores. There have naturally had to be severe cuts in supplies of toilet preparations, but the Board of Trade makes every effort to keep up a minimum supply of reliable goods.

"The current quota period for toilet preparations began on January 1 and will continue for six months. For the first time since restriction was introduced in June 1940, the quota has had to be cut from the annual rate of 25 to 20 per cent of the value supplied in the standard period (June 1939 to May 1940). But in partial compensation there is a separate quota for face powder and toilet dusting powder (free of quota for a short period last year) at 65 per cent per annum, and the Board of Trade is also prepared to consider applications for licenses to supply additional quantities of shampoos and baby toilet powders. There are a number of raw material restrictions: petroleum products may not be used in the manufacture of hair preparations for home or export trade except under license (which will only be granted if stocks exist which cannot be used for other purposes), while certain chemicals, such as acetone, butyl acetate and amyl acetate may not be used except under license, in quantities greater than one-half per cent by weight of the finished product. New restrictions on packaging have also been laid down. This industry is one of those now being subjected to a process of re-concentration, and firms taking part in approved schemes are to be rewarded by having their quotas raised to 50 per cent."

Lactones in Cosmetics

MACROCYCLIC LACTONES. *Fr. Pat. 49,302, Addn. to Fr. Pat. 830,689*. The lactone of 15-hydroxy-2-methylpentadecanoic acid is obtained from an appropriate ester of the above-mentioned acid by proceeding according to the method described in *Fr. Pat. 830,689*, provided that the lactone is the most volatile constituent of the reaction mixture. The lactone obtained finds application in cosmetics.

Coumarin Purification

PURIFICATION OF COUMARIN. *Rus. Pat. 57,254*. Crude coumarin dissolved in an inorganic acid; e.g., 30 per cent hydrochloric acid, is treated with formaldehyde or with substances that form formaldehyde under the process conditions. The solution of coumarin is then diluted with water and the product which separates is treated in the usual manner.

A Study of the Japanese Oil of Peppermint Industry

Japanese Oil of Peppermint is of a different variety from American and European . . . This oil is an important Japanese industry . . . Locality influences quality

by DR. ERNEST GUENTHER

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THERE exists considerable confusion regarding the botanical nomenclature of wild and cultivated Japanese mint. The opinion of some botanists that the Japanese plant is not a true peppermint has been attacked by others as incorrect. Schürhoff¹ believes that the parent plant of Japanese mint (*Mentha canadensis* D. C. var. *piperascens* Holmes) is a hybrid between *Mentha arvensis* L. and *Mentha aquatica* L. Japanese mint is, today, usually classified as *Mentha arvensis* var. *piperascens* Malinvaud or Holmes, and the closely related Chinese plant as *Mentha arvensis* var. *glabrata* Holmes, or *Mentha canadensis* var. *glabrata* Gray. They are not of the same species as American and European peppermints. O. M. Freeman² indicated the chief differences between true peppermint (*Mentha piperita*) and Japanese mint (*Mentha arvensis* var. *piperascens*) as follows:

NATURE OF JAPANESE PLANT

"Japanese mint is a perennial herb spreading by rootstocks which creep along the ground or just under the surface and root at the nodes. The erect stems of midsummer, 1 to 3 feet in height, are usually branched and bear flower clusters in the leaf axils. This differs from peppermint, *Mentha piperita*, which bears its flowers in more or less interrupted, terminal, usually leafless, spikelike panicles. The stems of Japanese mint are covered with soft white hairs, as are the leaves and calyxes. Peppermint is usually glabrous throughout, and if hairs are present they are sparse and are mostly near the nodes at the lower part of the stems. The leaves of Japanese mint are lanceolate and broadlanceolate with triangular blunt teeth. The leaf is gradually acuminate at the base with a margin ex-

tending nearly to the base of the petiole. The leaf of the peppermint is similar, but differs in having sharper acuminate teeth, and the base is acute or abruptly acuminate with the petiole scarcely margined. Peppermint rarely, if ever, produces seed in the United States while Japanese mint produces seed freely."

VARIETIES OF MENTHA ARVENSIS

To simplify matters for our purpose, we shall refer to the plant cultivated in Japan as "*Mentha arvensis*." The oils of other species occurring in Japan do not contain sufficient menthol to warrant commercial interest. The Japanese Department of Agriculture warns the growers against cross-hybridization with local wild varieties and advises them to improve the *Mentha arvensis* plantings by a number of varied measures.

There exist several varieties of *Mentha arvensis*, the two principal ones being distinguished by the color of their stems. Both possess round leaves and develop pale violet blossoms.

Mentha arvensis

a. Known in Japan as "hakka maru," it is a perennial herb growing wild in many parts of Japan from Karafuto to Taiwan. The plant stands about nineteen inches high; the stems are reddish-violet. This is the most widely distributed variety, cultivated on a large scale for commercial purposes because it gives the best yield of oil with a high content of menthol.

b. Another variety of *Mentha arvensis* is the so-called "ezo hakka," "ezo" meaning north. The stems are green. The plant grows more rapidly and is hardier. In fact, this variety grows abundantly in the northern parts of the Japanese island world, including Hokkaido, the Chishima Islands, and Karafuto. The plant occurs mainly wild and is cultivated only on a very small scale. Yield of oil and menthol content is inferior to "hakka maru."

Mentha japonica

Also a perennial, it grows wild throughout the Empire and is especially abundant on the islands of Hondo



An extensive Japanese mint field in the Province of Kitami on the island of Hokkaido.

¹ Arch. d. Pharm., 267 (1929), 515.

² See: A. F. Slevers and M. S. Lowman, "Commercial Possibilities of Japanese Mint in the United States as a Source of Natural Menthol," Technical Bulletin No. 378, U. S. Department of Agriculture, p. 5.

and Hokkaido. The plant is shorter than the varieties of *Mentha arvensis* described above. Purple blossoms appear in summer or fall.

Mentha neptoides

Known in Japan as "taiwan hakka." As indicated by its Japanese name, it grows wild and only in Formosa.

Mentha sylvestris

Its original habitat was Europe. The Japanese name is "ke hakka." It grows wild and is cultivated only on a very small scale.

Mentha viridis

Originally introduced from the United States, it was cultivated in Japan to a very limited extent. No longer cultivated today, it grows only wild. Its branches and leaves are dark green; hence the Japanese name "midori hakka."

Another variety of *Mentha viridis*, known in Japan as "oranda hakka," originally came from Europe. It was cultivated in Japan to a small extent but now grows mostly wild.

Mentha piperita

This perennial, whose original habitat was Europe, is cultivated in Japan only to a small extent, its cultivation for commercial purposes having been limited because of its low menthol content as compared with that of *Mentha arvensis*. On the other hand, however, *Mentha piperita* seems to be hardier and more resistant to disease and insect pests than the peppermint plants indigenous to Japan. The Japanese name for this species is "seyo hakka."

HISTORICAL DEVELOPMENT

Peppermint has been known in Japan as a medicinal herb since early times. The oldest record of peppermint oil is found in *Schin I Ho*, a medical book published around 984 by Tamba Yasu-yori who recommended employment of this oil in eye washes. However, it was not until the second half of the nineteenth century that commercial mint cultivation was undertaken in the province of Bitchu, about one hundred miles west of Kobe. The early production served exclusively for domestic consumption.

Expansion on a large scale of Japan's mint industry was begun only in the eighties when for the first time Keisuke Kobeyashi I exported recrystallized menthol. Previously Japanese menthol, because of inherent impurities and resulting low melting point, had not withstood the climatic changes during long transport abroad. Therefore, when the first lot of snow white menthol crystals arrived in London the in-



The mint is distilled right in the field. Here is a load of mint being brought in to still.

credulous consignee is said to have refused the shipment, believing it was not a natural product.

The newly established and flourishing mint industry of Bizu and neighboring Bizen and Bingo, which form the Prefecture of Okayama (also known as the Sam-bi District, Sam-bi meaning three B's), soon extended to the neighboring Prefecture of Hiroshima and finally toward the east to Yamagata. Cultivation in Hokkaido, which now produces more than 75 per cent of Japan's mint, did not commence until the early nineties.

IMPORTANT JAPANESE INDUSTRY

Gradually the production of mint oil and menthol developed into one of Japan's most important industries, and by 1914 the output amounted to half of the world's total production. Previous to the present war, mint oil and menthol were among the Empire's principal exports, a large part of the world's demand being supplied by Japan. In politically normal times, Japanese menthol holds a strong position on the world market, because Japanese mint oil can be produced cheaper and contains much more menthol than the American or European oils. However, Japanese dementholized mint oil is inferior in odor and flavor and can compete with the American and European products only on account of its low price.

As far as the crystallized natural menthol is concerned, Japan enjoys practically a monopoly on the world market, although the competition of synthetic menthol is being increasingly felt. The latter, however, presents no serious threat to Japan because acreage of the quickly growing mint could be

increased any time and, if necessary, the price of natural menthol could be lowered. Conditions in respect to this product are quite different from those pertaining to natural and synthetic camphor.

PRODUCING REGIONS

At present there exist in Japan two main mint producing regions:

1. *Province of Kitami* on the island of Hokkaido, Northern Japan.

Seventy-five to 80 per cent of Japan's mint oil is produced here. The harvest lasts from September to October. Average free menthol content of the crude oil ranges from 65 to 67 per cent.

2. *District of Sam-bi*, Southwestern Japan.

About 20 to 25 per cent of Japan's mint oil is produced in this section. There are three harvests yearly, one in June, one in August, and one in October. Menthol content of these oils is usually above 70 per cent.

The Sam-bi District used to produce much larger quantities, but it has suffered recently from prolonged droughts and from typhoons.

The Prefecture of Hiroshima produces only a few per cent of Japan's total output, and the negligible balance is scattered over various other parts of the Empire.

INFLUENCE OF CLIMATE UPON YIELD

The northern parts of Japan generally have fewer harvests per year, and the plants yield less oil. The yield of oil from plants grown in Hokkaido averages 1.3 per cent, from plants grown in Hiroshima and Okayama 1.6 per cent. The latter two prefectures produce per acre almost three times as much oil as Hokkaido.

	Average Winter Temp.	Lowest Winter Temp.	Average Summer Temp.	Highest Summer Temp.	Average Yearly Temp.	Average Yearly Rainfall
Hokkaido	-5.5°C.	-23°C.	15.5°C.	32°C.	5.5°C.	95 cm. (38 in.)
Hiroshima and Okayama	3.5°C.	-6.5°C.	24.5°C.	36.5°C.	14.6 to 18.1°C.	106.5 cm. (42 in.)

The above table² shows temperature and rainfall in those regions:

The bulk of Japanese mint oil is produced under climatic conditions resembling those of Virginia or North Carolina. Climate and soil influence not only the size of the crop but also the quality, particularly the menthol content of the oil. It is claimed that the mint oil produced in the Prefectures of Hiroshima and Okayama contains more free menthol but less menthone than that produced in Hokkaido, while the percentage of menthyl esters remains about the same. Hiroshima and Okayama thus produce the best quality of oil. The following table shows the relative constitution of oils produced in the various regions:

	Free Menthol Per cent	Menthone Per cent	Menthyl Esters Per cent
Hokkaido	65 to 67	16 to 18	4 to 5
Yamagata*	About 73	About 8	About 5
Hiroshima and Okayama	75 to 79 and higher	6 to 9	4 to 5

* Some years ago, when production in that section was still active.

LOCALITY INFLUENCES QUALITY

Thus, *Mentha arvensis* grown in different regions yields oils of different quality. When cultivated in other countries the plant sometimes, but not always, retains its high menthol content. During 1922 to 1936, A. F. Sievers and M. S. Lowman³ carried out experiments on the behavior of *Mentha arvensis* var. *piperascens* Malinvaud when cultivated in the United States. Their investigation showed that a satisfactory oil can be obtained, especially in California where two to three crops a year could be gathered. During the years 1923 to 1936, the total menthol content of the oils investigated by Sievers and Lowman varied from 77.43 to 86.56 per cent, free menthol 67.4 to 76.34 per cent, and ester menthol 7.24 to 17.41 per cent. The menthol content of the

plants showed no general decline. Several attempts have been made to raise *Mentha arvensis* in Oregon, but the plant does not seem to survive the damp winters which cause root rot. No planting of Japanese mint is known to be under cultivation at present in Oregon.

According to Sievers and Lowman,³ Japanese mint (*Mentha arvensis*) when grown in various parts of the United States, for instance, in California and Virginia, yielded about thirty pounds of oil, the latter containing, on an average, about 80 per cent total menthol. On favorable soil with good cultural practices, 50 to 60 pounds of oil may be obtained, while on the poorer upland soils yields below the average must be expected. In those regions where

climatological conditions make more than one cutting possible, relatively larger yields should be obtained. The extremely low price of imported Japanese menthol which prevailed before the present war gradually discouraged the planting of *Mentha arvensis* in our country, but now, of course, the matter has taken on an entirely new aspect.

PLANTING AND CULTIVATING

Mentha arvensis is cultivated⁴ mainly on hillsides, although the crop is richer in menthol when planted on low lying fields and rotated with rice. Fertile, well drained soil and a climate with little rain during the harvesting period are considered ideal. Sandy soil, rain in the spring and ample sunshine in summer produce a high menthol content.

For planting, root cuttings are taken from old but still vigorous plants. After plowing and hoeing of the field, the selected young, juicy roots, cut into 4 or 5 inch pieces, are planted in rows 14 to 16 inches apart. The planting is done in the late fall (end of November to beginning of December), and to a

limited extent also in spring. Fertilizing and careful weeding are essential.

The maximum yield of oil is obtained in the second and third years after planting; then it diminishes. During the fourth year the yield usually falls to such unprofitable levels that replanting becomes necessary. It is advisable to rotate the crop, preferably with *Leguminosae*, before replanting on the same field. Because of soil conditions, the fields of certain districts must be replanted at the end of each year.

(Continued in the August issue)

Oil of Peppermint

Production of Essential Oil from the Fresh, the Air-Dried, the Dried Whole and the Dried Ground Leaves of Peppermint. I. V. Vinogradova, V. V. Markov, A. V. Kurdyumov and G. S. Rolik. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Efirno-Masl. Prom., Sbornik Rabot po Myate 1939, No. 5, 92-103; Khim. Rezerat. Zhur. 1940, No. 2, 120-1.* The consumption of steam for distillation of fresh peppermint leaves is seven times greater than that for dried leaves. The dry ground leaves yield after a 15-minute distillation 42.4 per cent, the dry leaves 89.4 per cent, the air-dried peppermint 80.7 per cent and the fresh peppermint 71.7 per cent of the total amount of oil. The yield of oil from fresh peppermint is 1.20 per cent of the absolute dry plant and 9.080 kg. per hectare. The corresponding yields from the air-dried peppermint, from the dry peppermint and from the dry ground leaves are, respectively: 1.20 per cent and 9.063 kg. per hectare; 1.34 per cent and 10.032 kg. per hectare; 1.30 per cent and 0.75 kg. per hectare. The best oil is obtained from fresh and from air-dried peppermint. (C. A. 36)

Dispersions and Emulsions

DISPERSIONS AND EMULSIONS. *Fr. Pat. 851,565.* Dispersing and emulsifying agents are used compounds prepared by introducing one or more sulfuric acid radicals into water-soluble compounds of high molecular weight, such as polyvinyl alcohol, by means of sulfonation agents, such as oleum, chlorosulfonic acid, aldehydesulfonic acids, chloroethane sulfonic acid, chloromethylbenzenesulfonic acids or amino-sulfonic acids.

Vitamins in Emulsions

COSMETIC EMULSIONS CONTAINING VITAMINS. *U. S. Pat. 2,268,736, Jan. 6.* A morpholine soap of a higher fatty acid, such as morpholine oleate, ricinoleate or linoleate is used with a vitamin A and D concentrate. (C. A. 36)

² Ber. Schimmel & Co., 1919, 41.

³ *Journ. Amer. Pharm. Assoc. 6* (1917), 286.—See in this connection also "Commercial Possibilities of Japanese Mint in the United States as a Source of Natural Menthol," by A. F. Sievers and M. S. Lowman, Technical Bulletin No. 378, Aug., 1933, U. S. Dept. of Agriculture, Washington.

⁴ *Perf. Rec. 25* (1931), 78.

⁵ See in this connection also "Japanese Peppermint," Naofiro Inouye, from the Laboratory of Professor Edward Kreners, Madison, Wisconsin, 1908, Semi-Annual Report of Schimmel & Co., Nov., 1908.

Packaging

P O R T F O L I O



VARVA'S new "Nonchalant" face powder is spiced with Nonchalant's "devastating, devil-may-care fragrance". Six guest puffs are tucked atop the siren-red bow box as an added attraction. Below: Varva's new "Nonchalant" perfume.



HELEN LIEBERT: A new "Summer Cologne" has been added to this line. This delightfully cooling cologne is distinctly different from "A New Charm" and "Cross My Heart".



YARDLEY: A Beauty Bath Set, A Christmas feature, contains three bars of Lavender soap, English Lavender talcum powder with side sprinkler, and a wooden drum of Lavendomeal, a perfect addition to a bath.

HARTNELL: Two colognes added to this line, "White Shoulders" and "Menace"; the former for an "evening of lights"; latter for "dramatic perfection."



DAGGETT & RAMSDALL: A new leg make up—a soothing, creamy lotion in a neutral tone.

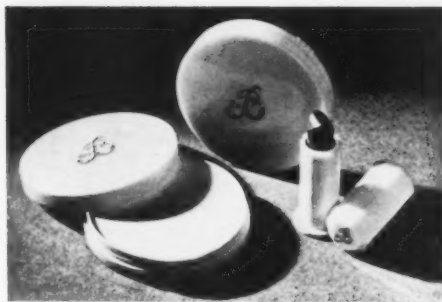




VOLUPTE: These two handsome compacts of the sifter type are recent additions to the Volupté line. Both the square and the round compact cases are of sterling silver.



OGILVIE SISTERS: A color stick for temporary coloring, not a dye nor a bleach.



HUDNUT: A new beauty cake of the Du Barry line, in five shades, white, medium, dark, light tan and deep tan. According to reports it "does a grand job without drying".



HARRIET HUBBARD AYER: Two luxurious cream colognes added to line—"Pink Clover" and "Honeysuckle."



PRIMROSE HOUSE: Chiffon Liquid Hosiery is "easy to apply, smooth finishing waterproof, will not rub off."



REVLON: The "Victory" crate! Fitted with nail enamel, oily remover, base-coat adheron, other accessories.



PONDS: Flowered cases designed on the swivel principle and made of paperboard with plastic head and heels.

PEGGY SAGE: At Right, the new Peggy Sage song bird set housing the satin base, Shore Leave—a rich, rosy red shade with a blue tinge—and the polish remover—the requisites to masque that work-a-day look so noticeable in hands.

LUXOR: Below, Right, is one of the new Christmas packages of the Luxor line. These, however, are not too Christmassy in color and design that they cannot be used after Christmas.

MILKMAID: Below, a combination bath accessory set. This is one of four combinations: the Soap Mit and Puff holding bath powder; the Bath Cologne and Bath Powder; the Bath Cologne and Powder Puff; and the Soap Mit and Bath Powder.



Female Majority

A new era is rapidly approaching in which women will be in the majority in the United States, a change that holds implications of vast importance in the future of business.

Despite the fact that nature provides approximately 106 males to each 100 females the lengthening of the life span of the so-called weaker sex, combined with the greater vulnerability of the "stronger sex" to the hazards of life, is about to bring an end to the long-standing male dynasty.

The 2,800,000 male majority which the nation had in 1910 is being whittled away at the rate of 100,000 a year, according to census figures.

Money

What is money? It is tangible enough—one can see it, feel it, hoard it, spend it, if one is fortunate enough to get it. What is it? It's the roof over the head of man, the floor under his feet, the pillow beneath his head, the food and drink in his body, the shoes on his feet, the clothes on his back. It's what enables him to live! And all too often it's what causes him to die.—*Phoenix Flame*.

Emulsion Behavior

The difference between borderline emulsions made with a minimum amount of emulsifier and a maximum particle of the material being emulsified, and stable emulsions is shown in the building up of microscopic films, as is also the difference between oil-in-water and water-in-oil emulsions.

A network of the non-volatile portion of the aqueous phase traverses the film of oil-in-water emulsions and holds in its net the oily film-forming material. No heterogeneous film formation is noticeable in water-in-oil emulsions of the borderline type and the presence of bound water cannot be detected by simple microscopic methods. Spherical gels are formed in the film of stable water-in-oil emulsions.

The films formed in oil-in-water emulsions with non-oil unsaponifiable matter, such as rubber, are opaque, while those of the borderline type are transparent.

An interesting report was made on the behavior of emulsions in an absorptive substrata of pinewood, where it was found that an outstanding variation exists between a primary zone of wide cells, strongly absorptive and easily wet by water, and a latter zone of narrow cells, which are resinous, nonabsorbing, and not easily wet by water. In the former, primary zone of

wide cells it was found that aqueous colored liquids were easily absorbed and strongly dyed the cells. The latter, or narrow, celled zone, however, repelled the colored liquids and remained undyed.

Tests were also made with oily liquids, which the primary zone absorbed strongly in proportion to their viscosity, their dyeing effect, however, being very slight. The latter zones absorbed no oil but were sufficiently wetted by it that the dye carried by the oil was noticeable on the surface.

These experiments demonstrated the wetting properties of mixed systems, particularly of the various types of emulsions. Only the primary zone was susceptible to both wetting and dyeing by the oil-in-water emulsions, but both zones were wetted and dyed by the water-in-oil emulsions.—*Schimmel Briefs*.

Management

Our post-war planning — and 143 agencies, public and private, are engaged in charting our destiny—starts with the premise that we must have a greatly increased business activity. The figures for this national income run all the way from \$100,000,000,000 to \$250,000,000,000. Our top pre-war year was \$89,000,000,000. The larger figures are, therefore, impressive.

Most of the plans, if not all, leave out one important factor. Business activity does not "just happen." To produce more of no matter what, the individual must be prodded, or persuaded. Business is not self-starting. The pressure upon progress comes only from men of spirit, with the enthusiasm to do, plus the capacity to do.

Management's spirit and know-how should be, must be, encouraged and developed if our business activity is to be doubled. There is no other way. The promise of after-the-war for us—and the world—lies in our sober evaluation of the quality of management, in our recognition of it as a great national asset, in an encouragement too often recently denied.—*Merle Thorpe*.

Government in Business

Government has become the largest industrial owner in America. In the last three years it has poured thirty billions of dollars into industrial plants and equipment, and into other producing and processing facilities and into real estate.

Its ownership in this field alone equals one-third of the total value of all the private industrial companies in the nation—the companies owned by sixty million Americans through their investments in stocks and bonds or through life insurance and savings ac-

counts. Government, the biggest industrialist in war, is in position to become their biggest competitor in peace.

What is done with these vast government-owned facilities when peace comes may determine the future form of America's political and economic structure.—*Nation's Business*.

Women Factory Employees

As a result of careful study of all the various factors involved and how best to meet them, the following rules of personal conduct are suggested as a guide for the male foreman so that he may avoid the pitfalls and dangers inherent in supervising women:

1. He should be friendly but impersonal.
2. He should avoid too close personal interest.
3. He should control his temper in dealing with women.
4. He should avoid public disciplining of women.
5. He must be consistent in his administration of discipline.
6. Where trouble arises he must always get all the facts.
7. He must allow women an occasional opportunity to "blow off steam."
8. He must give them an answer to every complaint.

One important auxiliary is in adequate restrooms staffed by matrons. When a foreman finds it necessary to correct a woman worker and nervousness or tears result, he is advised to send her to the restroom to lie down awhile and to pull herself together. Women, we find, are prone to take criticism personally and to be unnerved about it. The best restorative we have found is to provide an opportunity to talk or think it over.—*E. H. van Delden*.

When the War Ends

When the war does end we shall be faced simultaneously with two terrific problems. We must liquidate our war business and at the very same time, with the same organization, must re-establish ourselves in our peacetime business. This will put a severe strain on our organization—and on our stockholders. The merchandise with which we go to our trade is the "working capital" which is going to start us off. It must be there when we need it.

A great deal of "paper work" can be done in preparation for that day when peace begins. Manufacturing orders must be written, lists of materials prepared, purchase orders placed. These are only a few typical examples of paper work, a great deal of which can be done profitably in anticipation of the day.—*John S. Tomajan*.

¹ *Fet. u. Self*, 48, 512-16 (41)

Tentative Specifications for Face-Paint Camouflage

The following specifications on Face-Paint Camouflage — EBP No. 234B of June 8, 1943—have been issued by the Engineer Board and they supersede EBP No. 234A issued under date of January 1943

A. APPLICABLE SPECIFICATIONS

A-1. *Specifications*—The Corps of Engineers U. S. Army Tentative Specification enumerated below of the issue in effect on the date of the invitation to bid is made a part of this specification; except that in case of its conflict with this specification the provisions of this specification shall govern: T-1213—Camouflage Colors.

B. TYPE AND COLOR

B-1. *Type*—This specification covers one type of face paint in stick form for camouflaging personnel.

B-2. *Color*—The colors shall be "Light Green," "Sand" and "Loam," conforming to supplement "B" to Corps of Engineers Tentative Specification T-1213, Colors No. 1, 3 and 7, respectively; and any other colors as may be specified in the invitation to bid.

C. MATERIAL AND WORKMANSHIP

C-1. *Materials*—The materials used in the formulation of the face paints shall be as specified herein. When a definite material is not specified, the material used shall be of the best quality normally used for the purpose in good commercial practice. All materials used shall be free from defects and blemishes (imperfections) that may affect the serviceability and appearance of the finished face paints and all materials used shall be such as to produce finished products meeting the requirements of this specification.

C-2. *Workmanship*—The component ingredients shall be compounded in accordance with the best standard practice to produce smooth, homogeneous, stable, high quality face paints.

D. GENERAL REQUIREMENTS

D-1. *Description*—The face paints shall be free from excessive greasiness and shall be easy to apply. They shall leave a dull, non-glossy film on application. They shall be water repellent, not wash off in the rain nor run due to perspiration, but shall be easily removable with soap and water at normal indoor temperature.

D-2. *Toxicity*—The face paints shall be non-toxic. Not more than 20 parts per million of lead nor more than 2 parts per million of arsenic shall be present in the finished face paints, or in any of the individual ingredients. The face paints shall be free from any other deleterious substance and shall comply with the requirements of the Federal Food, Drug and Cosmetic Act, with respect to adulteration.

D-3. *Consistency*—The face paints shall be suitable for use in all climates at temperatures ranging from 20 to 150 deg. F. The melting point of the finished face paints shall be not less than 155 deg. F. when tested by the method for Class III materials, described in the United States Pharmacopoeia, Twelfth Revision (U.S.P. XII), page 597.

D-4. *Color Uniformity*—The color mixtures shall be uniformly dispersed throughout the face paints so that no color specks will be noticeable at eight to ten magnifications, when tested as specified in paragraph F-3a.

D-5. *Stability*—The face paints shall show no signs of separation, bleeding, color change, crumbling, improper function or rancidity when subjected to the temperature tests as specified in paragraphs F-3c through F-3c (3).

D-6. *Insect Repellent*—The face paints shall contain 30 per cent by weight of insect Repellent No. 612 as manufactured by the National Carbon Co., New York, N. Y.; or 25 per cent by weight of insect Repellent No. 612 plus five per cent by weight of dimethylphthalate, to afford maximum protection from mosquitoes, flies and similar injurious insects.

D-7. *Antiseptic*—The face paints shall contain an inhibitory antiseptic, phenyl mercuric benzoate, at the rate of one part of phenyl mercuric benzoate to 25,000 parts of face paint by weight. The zone of inhibition shall be five mm. in the absence of horse serum, as determined by F.D.A. Agar Plate Method described in Circular 198, a publication of the Department of Agriculture.

D-8. *Composition*—The face paints

shall consist of the following amounts and kinds of ingredients:

	Grams
Hydrogenated castor oil	25
No. 612 Repellent	30
Color mixture	38
Phenyl Mercuric Benzoate	0.004
Beeswax, yellow	4
Lanolin, anhydrous	3

	Grams
Hydrogenated castor oil	25
No. 612 Repellent	25
Color mixture	38
Dimethylphthalate	5
Phenyl Mercuric Benzoate	0.004
Beeswax, yellow	4
Lanolin, anhydrous	3

D-8a. *Color Mixture*—It is required that color mixtures shall be blended from five pigments; namely, yellow iron oxide, titanium dioxide, chromium oxide, carbon black and umber. The pigments shall have a neutral reaction and conform to the toxicity requirements of paragraph D-2. Pigments conforming to the following analyses have been found to give satisfactory results:

D-8a(1). Yellow Iron Oxide

	Per Cent
Ferric oxide (Fe_2O_3)	84.0 minimum
Water solubles	0.5 maximum
Loss on ignition	15.0 maximum
Moisture at 105 deg. C.	2.0 maximum

D-8a(2). Titanium Dioxide

	Per Cent
Titanium dioxide	99.0 minimum
Water solubles	0.15 maximum
Acid solubles	0.35 maximum
Loss on ignition	0.5 maximum
Moisture at 105 deg. C.	0.5 maximum

D-8a(3). Chromium Oxide

	Per Cent
Chromium oxide	99.0 minimum
Water solubles	0.3 maximum
Acid solubles	0.3 maximum
Loss on ignition	0.5 maximum
Moisture at 105 deg. C.	0.5 maximum
Soluble chromates	0.0 maximum

D-8a(4). Carbon Black

	Per Cent
Carbon content	85.0 minimum
Water solubles	0.5 maximum
Water solubles (after ignition)	0.3 maximum
Soluble sulfates	none
Ferric oxide	none
Ash after ignition	3.0 maximum
Moisture at 105 deg. C.	11.0 maximum

D-8a(5). Umber

	Per Cent
Ferric oxide	36-41
Water solubles	0.5 maximum
Water solubles (after ignition)	0.3 maximum
Soluble sulfates (as sodium sulfate)	0.5 maximum
Loss on ignition	9-10
Moisture at 105 deg. C.	2.0 maximum

D-8b. Hydrogenated Castor Oil

Hydrogenated castor oil shall conform to the following requirements:

Melting point	86.8° C.
Titre	71.7° C.
Free fatty acids (as oleic)	1.1%
Iodine value	3.6
Saponification value	179.6
Acetyl value	145.5

D-8c. Beeswax

Beeswax shall conform to the requirements given for it in the U.S.P. XII, page 124.

D-8d. Lanolin

Anhydrous lanolin shall conform to the requirements given for it in the U.S.P. XII, page 35.

D-8e. Phenyl Mercuric Benzoate

Phenyl mercuric benzoate shall be of medicinal grade free from thiophene and shall have the following analysis:

Phenyl mercuric benzoate	99.0 per cent minimum (by Vollhard method)
Mercury	49.5 per cent minimum
Melting point	87° to 100° C.
Solubility	Soluble in cold methanol, 1:30, giving clear or only faintly cloudy solution. 100 mg. soluble in 200 ml. of five per cent sodium hydroxide solution with no yellow or gray (mercurous or mercuric inorganic ions) precipitate or coloration.

D-8f. Dimethyl Phthalate

Dimethyl phthalate shall conform to the following analysis:

Purity	99 to 100 per cent
Acidity (as phthalic acid)	0.1 per cent maximum
Specific gravity	1.192 to 1.194 at 20° C./59° C.
Flash point	295° to 300° F.
Boiling point	282° C.
Distillation range	280° C. to 290° C.
Color	light straw to colorless

E. DETAIL REQUIREMENTS

E-1. Composition of Color Blends—It shall be the responsibility of the manufacturer to choose the exact percentage composition for each color blend so that the finished face paints, when tested as specified in paragraph F-3b, will match the standards specified in paragraph B-2, herein. The following formulas are suggested but are not mandatory:

E-1a. Color No. 1—Light Green

	Parts by Weight
Chromium oxide	25
Titanium dioxide	10
Yellow iron oxide	10

E-1b. Color No. 3—Sand

	Parts by Weight
Chromium oxide	1.4
Umber	1.5
Yellow iron oxide	7.0
Titanium dioxide	25.0

E-1c. Color No. 7—Loam

	Parts by Weight
Carbon black	25
Yellow iron oxide	23
Titanium dioxide	3.0

F. SAMPLING, INSPECTION TESTS

F-1. Sampling—A minimum of four sticks per batch, selected at random, shall be submitted to the Contracting Officer for tests.

F-2. Inspection—The plant in which the face paints are being made shall be open at all times during working hours to the Contracting Officer and his representatives or inspectors, who shall have the right to follow the materials through all the processes of manufacture. Every facility including suitable office space, equipment and supplies shall be given the inspectors for the proper execution of their work. The contractor shall make, at his own expense, and previous to tests by the Contracting Officer, or his representatives, sufficient tests to insure that the material conforms in all respects to this specification.

F-3. Tests—The face paints shall be given tests as may be necessary to assure compliance with this specification. When tests are made at the factory, the contractor shall furnish all facilities and supplies necessary to determine whether or not the material conforms to this specification. The manufacturer shall be held responsible for any defects in material or workmanship which are of such a nature that they cannot be detected by careful inspection and tests. Tests shall include but not be limited to the following:

F-3a. Color Uniformity—Break a package of the face paint to get a clean fracture and examine under eight to ten magnifications for color specks.

F-3b. Color Matching—Colors shall be matched as follows: Immerse a strip of white filter paper in the melted face paint. Remove and cool to room temperature and then compare with the color standard.

F-3c. Temperature Stability Tests—The face paint shall be subjected to various temperature tests as follows:

F-3c(1). Cold Test—Place one opened and one closed package of the face paint in a refrigerator in which the temperature is maintained at 15-20 deg. F. After seven days, remove from refrigerator and bring to room temperature, then examine.

F-3c(2). Heat Test—Place one opened and one closed package of the

face paint in an oven maintained at 140 to 145 deg. F. for seven days, then remove and examine contents. (NOTE: Use a paper cup in which to place sticks under test. Do not use glass or metal container if it comes in direct contact with metal shelf of oven.)

F-3c(3). Cycle Test—Place one opened and one closed package of the face paint in an oven maintained at 140 to 145 deg. F., for eight hours. Remove and place in a refrigerator at 15 to 20 deg. F., for 16 hours. Repeat the cycle for seven days. Then examine. (See note in paragraph F-3c(2).)

G. PACKAGING, PACKING, MARKING

G-1. Packaging—The face paints shall be put up in dull colored cylindrical containers made of a suitable non-critical material. The outside dimensions shall be approximately one inch in diameter by three inches in length. It shall contain one stick, equally divided into two camouflage colors, as specified in the invitation to bid, joined end to end, and shall be not less than two cubic inches or more than 2.15 cubic inches in volume. There shall be a screw-type or press-type cover for both ends of the container. The edges of the cylinder shall not be sharp. Each container shall be labeled with name and color of contents.

G-2. Packing—Packing shall be in accordance with the instructions furnished by the Contracting Officer.

G-3. Marking—Marking for shipment shall be in accordance with instructions furnished by the Contracting Officer.

H. NOTES

H-1. Copies of this specification may be obtained from the Engineer Board, Fort Belvoir, Va. U. S. Army Specifications may be obtained from the Office, Chief of Engineers, Washington, D. C.

H-2. Engineer Board Tentative Specifications are ad interim specifications which may be converted to Corps of Engineers Tentative Specifications. They are used for the procurement of engineer equipment during development and for the purpose of making recommendations to the Office, Chief of Engineers. They should not be accepted as indorsed by the Corps of Engineers or the Engineer Board for quantity procurement, unless accompanied by specific instructions as to their use.

H-3. When government drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the United States thereby incurs no responsibility or any obligation whatsoever; and, the fact that the Government may have

formulated, furnished or in any way supplied the said drawings, specifications or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation or conveying any right or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

Lend-Lease Purchase

The latest report shows that 897,000 pounds toilet soap was purchased recently for lend-lease, making, up to this date, a total of 2,366,750 pounds bringing \$712,583. Agriculture has announced that manufacturers who have sold palm oil to the Government may now purchase quantities equal to the quantities they sold. Permits to purchase must be negotiated with the Fats and Oils Branch, Food Distribution Administration, Washington, D. C. The apple syrup devised by the Department of Agriculture scientists as a substitute for glycerine is now in large scale commercial production. Five plants in the United States, located in Virginia, Pennsylvania, New York, California, and Oregon, and one plant in Canada, have produced a total of 3,000,000 pounds. Tobacco people have used it in place of glycerine. The syrup is bland, honey-colored, and can be processed in milk condenseries, fruit juice concentrators with enclosed top evaporators. The syrup may be made from waste peels and cores from canning and dehydrating plants. A bushel of off-grade apples makes about a half gallon of syrup. It is expected 15,000,000 pounds syrup will be made during this year.

Dispensing Tubes

Dispensing Tubes for Fatty Coloring Compositions, Dental or Shaving Creams, etc. *U. S. Pat. 2,268,462*. A tube body is used which is formed of cellulosic material, parchmentized to a suitable degree, and treated with an aqueous dispersion or organic solvent solution of natural or synthetic rubber and with a film-forming varnish.

Voluntary Allocation

Under a merchandise allocation plan recently adopted by Butler Bros., Chicago wholesale house, some retailers now have the rare pleasure of receiving shipments of war-scarce merchandise without so much as asking for them.

Working from an alphabetical list of dealers, including voluntary chain stores, each of the company's seven branch houses determines how far it can spread each new supply of scarce

goods and still keep dealer shipments large enough to be worth while.

A dealer's quota is usually determined by his 1942 purchases. When the branch receives another quantity of the same item, the allocation to dealers starts where it left off before, on the alphabetical list. A dealer can return any shipment he doesn't want—but so far, nobody has exercised this privilege. Noncritical merchandise is still shipped to dealers only when orders are placed in the customary routine. Items included in the plan range from work clothing to hardware to toys. Part of the allocating is handled by salesmen now withdrawn from the road because of merchandise shortages and gasoline rationing. Despite the clerical chore of dividing up relatively small lots of scarce goods into still smaller shipments to many dealers, the company reports that dealers' enthusiasm for the plan makes it worth while. It is also expected to relieve the burden of dealer correspondence concerning unfilled orders for merchandise.

Emulsion

Emulsions. *Fr. Pat. 851,777*. The emulsions are composed of water, oil, alkali metal salts of alkylated phenol-sulfonates and of alkali metal salts of sulfonates soluble in the oil, the proportion of the latter being at least five per cent.

Cosmetic Deodorant

Cosmetic Deodorant. *U. S. Pat. 2,226,177*. A composition of matter for use in deodorizing the human body without inhibition of normal perspiration containing as its active ingredient a substantially water insoluble alkyl-substituted hydroquinone in a quantity sufficient to have substantial anti-oxidant effect, but insufficient to render the composition toxic, in a neutral non-toxic carrier having no deleterious action on the skin; said composition being adapted to be applied directly to the body to deodorize the same. (*J. Soap, Perf. & Cosm. 14*)

Alginate for Cosmetics

Sodium Alginate and Its Use In Cosmetics. *J. H. Frydlander. Arch. droguerie pharm. 7, 87-8 (Apr., 1939); Chem. Zentr. 1940, I, 3329-30*. The alginic acid obtained from sea algae is commercially available as sodium alginate, in part under the name of Manucol. The slime formed when the salt is treated with water can be used as a base for cosmetic preparations. Directions are given for its use for hand and hair lotions and mouth washes, etc. (*C. A. 36*)

Prohibition Drive

Executives in the alcoholic beverage industry are studying plans for a new drive by prohibitionist forces. According to reliable sources in Washington available to Allied Liquor Industries, the board of strategy of the dry forces has girded itself for the commencement of a tremendous drive to put over prohibition this year. This effort will in all likelihood be more intensive than the campaign of last year.

Allied's News Letter describes this new prohibition drive in detail and says that certain conclusions have been reached by the dries after a series of meetings which indicate that prohibitionists are prepared to launch a three-pronged attack to stress: (1) The need for protecting 18-year-old draftees from "liquor and prostitution" in the vicinity of military establishments; (2) The fight on juvenile delinquency; and (3) The fight on absenteeism. — *Glass Packer*.

Sunburn Preventive

Sunburn Preventive for Use on the Skin. *U. S. Pat. 2,274,725*. A composition permitting the passage of wave bands of the sun rays having a beneficial effect upon human skin, but preventing sunburn, is formed of a non-irritating vehicle mixed with hydroquinone (suitable amount about 5 per cent) and with a relatively small proportion (suitable amount about 1 per cent of a metabisulfite of an alkali or alkali earth metal, giving the composition a pH under 7. Such compositions are stable and retain their normal color over long periods. (*C. A. 36*)

Export Trade

For the duration, at least, export trade as well as import, has become a transaction between governments, not between individuals or private business. For instance, there are a number of American firms which have branches in Australia and elsewhere. If the branch in a foreign country wishes to obtain supplies it cannot, under existing conditions, secure them from the parent source at home; it must buy through the government procurement officer wherever it may be located whatever it wants and take whatever it gets from the open market. It has the privilege of attempting to buy from its home office by order. But the home office and plant must naturally obtain an export license and go through the many steps that are necessary to obtain shipping space. Details to arrange transactions must be taken up with the Department of State and the Board of Economic Warfare.

Today's Challenge

Production for modern war necessarily spells serious economic dislocation. Today, thousands of small manufacturing establishments face extinction. They have not as yet been fitted into production for war and priorities prohibit normal pursuits. They are in distress. If they are allowed to die, the basic pattern of our economic system may be destroyed—forever. Our national industrial economy rests, not on a few large centers of mass production but on countless small towns, each with one or two small factories. Around them the life of the community largely revolves. Starve those factories—by the thousands—and those communities will linger and die. It will be all but impossible to revive them. We must not become a nation of ghost towns or our great centers of production will likewise die. Their steadiest markets will be gone. The economic strength of America will have ebbed. For the sake of tomorrow and a healthy post-war America, small business must be preserved. That is today's challenge. —Col. R. W. Johnson, chairman, *Smaller War Plants Corp.*

Employees Over 40

The average age of American population has been increasing every year. After the war it is likely that there will be as many people more than 40 as there are under that mark. Unless we want to have half our population dependent upon the other half for support we can't afford to go back to the days when all too often the man or woman past 40 was turned back at the factory gate.—*Nation's Business.*

Industrial Dermatitis Creams

Industrial dermatitis, due to the action of imbedded grease and grime or to the effects of chemical substances, has long been recognized as a major factor in workers' disability and time-loss. With so many women going into the war industries, too, their more delicate skins make the need for suitable preventive and protective measures more vital than ever.

Prevention is always more important than treatment. In the case of industrial dermatitis the plentiful use of plain soap and water is recognized as a prime prophylactic measure. During recent years, however, it has been increasingly recognized that the use of skin-protective creams can also aid in preventing dermatitis. Such creams serve to protect the skin from the penetration of dirt, grime and grease, and facilitate the removal of such substances by the use of soap and water. In many

instances, these protective creams also act as barriers to the action of deleterious chemical substances.

Many formulas, some of them highly specialized for specific industrial conditions, have been developed. Glycerine is a standard and frequent constituent of such products. Not only does glycerine itself serve as a barrier material to many greases, solvents and the like, but its inclusion in the formulas adds highly desirable properties to these specialized creams.

The recent industrial literature offers many instances of such glycerine uses. Thus, Dr. C. A. Tyler, in an article on "Hand Protective Creams" in the September 1942 issue of *Soap*, described a series of preparations, many of them containing glycerine as a major ingredient. One such, a product in use for a number of years, contains:

Tallow soap	6 parts
Glycerine	28 parts
Sodium silicate solution	19 parts
Water	47 parts

An example of glycerine's use in so-called "general type" protective creams is offered in the following formula:

Stearic acid	12 parts
Lanolin	3 parts
Glycerine	6 parts
Potash soap (40%)	5 parts
Magnesium stearate	10 parts
Water	50 parts

Dissolve the soap in warm water, and, with constant stirring, run in the melted stearic acid and lanolin, then add the glycerine. Mix in the magnesium stearate with constant stirring, and it is preferable to mill the entire mass while it is still warm. One part of a suitable perfume may be added.

Watch Sweden

By following the postwar trade moves of Sweden, the United States will get a realistic point of view which represents a ringside seat all through the war, and one which is constructive because Sweden has to get along with all countries.

In resuming trade with continental Europe after the war, it will behoove foreign traders to "watch what the Swedes are doing and work closely with them."—*McCord Lowes.*

Open Mindedness

While an open mind is priceless, it is priceless only when its owner has the courage to make a final decision which closes the mind for action after the process of viewing all sides of the question has been completed. Failure to make a decision after due consideration of all the facts will quickly brand a man as unfit for a position of responsibility.—*Contact.*

Perfuming Lipsticks

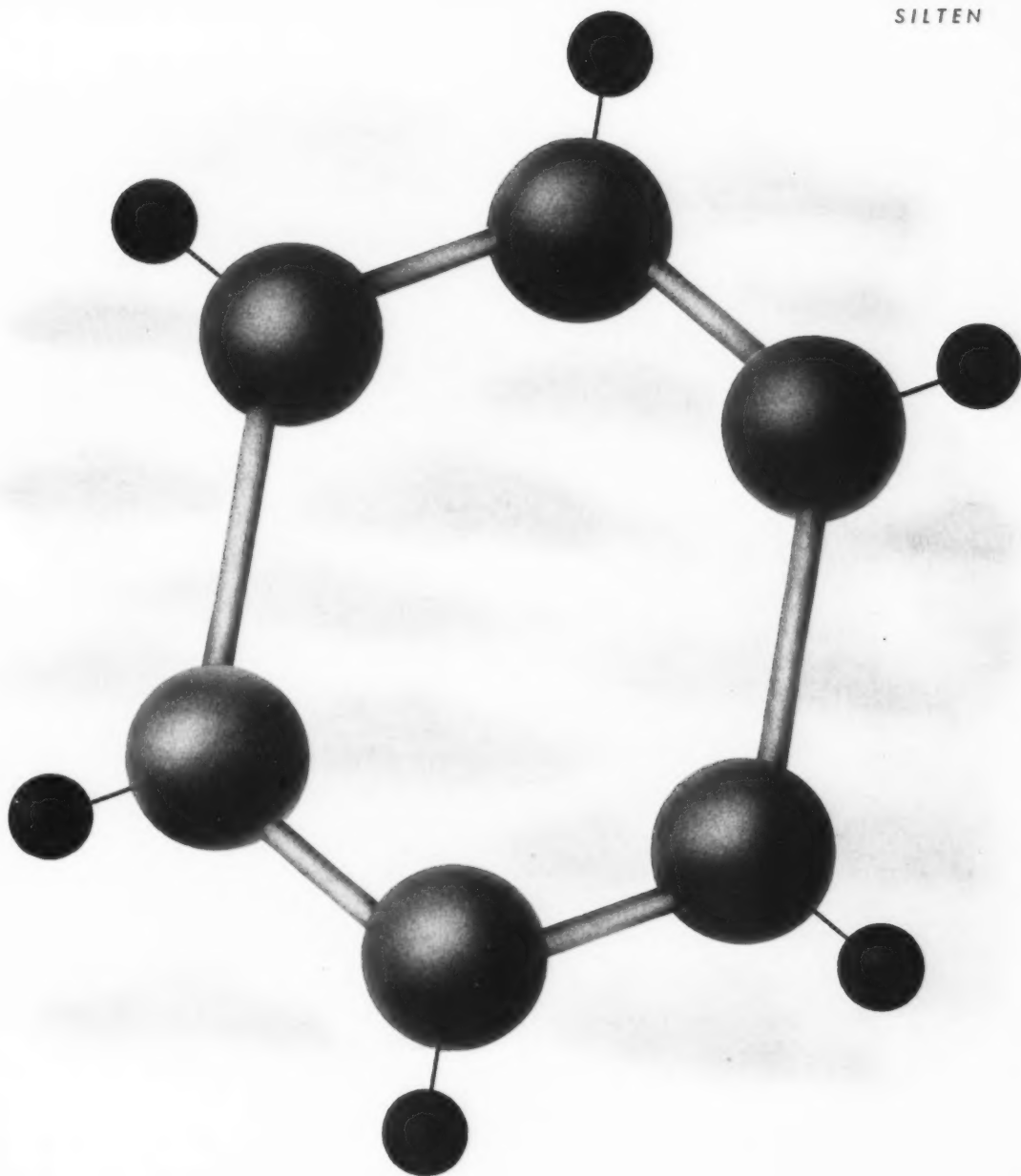
The successful composition of a lipstick perfume requires a very thorough study and knowledge of the various aromatics and essential oils which are to be used. Most aliphatic ketones, for instance, are not suitable and likewise the less volatile alicyclic ketones cannot be used as they are either too powerful in odor or have a disagreeable flavor. There are, of course, a few exceptions, among these, ketones such as noviolone which have an agreeable flavor. Aldehydes such as cinnamic aldehyde, heliotropin, vanillin, and ethyl vanillin may be used in small quantities; and certain essential oils will give interesting effects if used judiciously in combination with other aromatics, such as oil celery, for instance. The effect may not be immediately noticeable, however, as in the case of coriander oil, which develops a lemon-like aroma only upon storage, this pleasant odor being produced by oxidation of its content of d-linalool into citral.

Certain essential oils such as geranium, lemongrass, petitgrain, patchouly, and vetiver are not suitable. Some essential oils which have a pronounced flavor of their own are suitable, but in formulation care should be taken that their rather pronounced flavor or spice character does not obscure the pleasant perfume effect of the mixture, for it is the odor which sells the lipstick in the first place and the flavor which maintains its sales appeal. To mention the most important among the essential oils and aromatic chemicals for such uses we would refer to oil anise and anethol, oil almond and benzaldehyde, cinnamon oil and cinnamic aldehyde, oil cloves and eugenol, oil lemon, orange and mandarin, cinnamic alcohol, anisic aldehyde, as well as amyl acetate, ethyl butyrate, etc.

It has been said that rather than call it perfuming lipsticks, one should more appropriately term it aromatization, as the importance of this phase of the final effect should under no circumstances be underestimated. It is therefore frequently necessary to adjust or rework an otherwise satisfactory perfume combination, for which purpose careful additions of so-called 100 per cent flavor bases may often prove effective.

All in all it will be evident that often lengthy experimentation entailing unnecessary expense can be avoided by entrusting the formulation of lipstick perfumes to houses that have made it their business to study the intricate effects of the various aromatics in these varied products and that are in a position to put their knowledge of odor and flavor types at the disposal of the lipstick manufacturers.—*Schimmel Briefs.*

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As the war economy tightens, maintenance of cherished standards of quality, and of reputation painstakingly built over the years, becomes increasingly a challenge to the perfumer's art. At such a time, careful selection of available perfume raw materials is most essential.

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Basic Principles in Manufacture of Emulsion Flavors

Scarcity of alcohol and other available solvents warrants republication of fundamental investigation at Mellon Institute in 1920 . . . Mechanical emulsification only discussed

by MELVIN DeGROOTE

A FLAVORING extract is a solution of the odorous and sapid principles, derived from the proper plant, in ethyl alcohol of a suitable strength. The aromatic principles which are responsible for the flavoring value, have widely different chemical and physical properties. They may be volatile oils, as in the case of lemon and orange. Cayenne pepper and paprika contain non-volatile or fixed oils. Vanilla beans are chiefly valuable for their resins. Vanillin and coumarin are crystalline solids that are employed to a large extent in the flavoring industry. Likewise, the flavoring substances obtained from certain plants may be a combination of two or more of the above-mentioned classes.

The various principles or flavoring substances are almost uniformly insoluble in water, and soluble in ethyl alcohol. The solubility in ethyl alcohol naturally varies with the particular oil or resin, the concentration, temperature, etc. It has usually been accepted that the value of a flavoring extract depends upon the aromatic constituent and not particularly upon the solvent or vehicle employed. Obviously, as the price of ethyl alcohol increased, industrialists have turned to use of substitutes. In fact, the possible abuse of non-beverage alcohol and the ever-increasing amount of legislation governing its use under State and Federal prohibition have been equally important factors.

The efforts of the majority of investigators have been directed toward a

substitute that would satisfactorily replace ethyl alcohol, and in particular be as convenient to use in actual manufacture. There are various substances that will act satisfactorily as solvents but are objectionable from a bromatological standpoint. It is interesting to note in passing that, to date, glycerine is the only substance that has been used to any considerable extent in addition to ethyl alcohol as a solvent or vehicle in flavoring extracts. However, non-alcoholic flavors have appeared on the market in forms other than the ordinary thin fluids.

EMULSION TYPE SATISFACTORY

Among these various forms of flavors, the emulsion type has proven the most satisfactory and possibly the one with the greatest future. An emulsion by definition consists of an apparently homogeneous mixture of two immiscible liquids—the one liquid being suspended in very fine droplets throughout the other. In other words, the very fact that the various aromatic constituents of extracts are insoluble in water, becomes the fundamental principle which is responsible for the emulsion form of flavors. Furthermore, it should be remembered, that these flavoring constituents, in this form, are just as valuable, as far as flavoring distribution is concerned, as the alcoholic extracts.

Emulsion flavors have competed with alcoholic extracts in practically every field in which the latter have been used. Although these products are the result of an effort to find a substitute

for alcoholic extracts, it will be shown that they possess certain characteristic properties that make them even more valuable in some respects than alcoholic extracts. The fact that these emulsions are finding a ready sale, in competition with alcoholic extracts, is indeed evidence of their inherent merit. At this writing, it may be fairly stated that the better grades of emulsions have passed the stage of actual survival and are about to enter a field of intensive development. This development will be fostered by the present trend in commercial demand, and by results of chemical research and exhaustive inquiries by the various factors that are interested.

HEAVY VISCOSITY FLAVORS

Emulsion flavors are sold in considerable quantities to the household trade. They are usually packed in collapsible tubes or in small wide-mouth bottles, the size of the container usually varying from one to two ounces. As in the case of alcoholic extracts, the demand centers largely in vanilla, lemon, orange and almond. The vanilla tube flavor brings up the point that some tube flavors are not emulsions. In this article the expression vanilla flavor will be used to include vanilla imitations and compounds.

The idea of a heavy viscosity is closely linked with emulsion flavors in the minds of many people. A product can be prepared by dissolving vanillin and coumarin in glycerine. Such a product is sometimes sold as an emulsion flavor.

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It is not actually an emulsion because the vanillin and coumarin are just as truly in solution in the glycerine as they would be in alcohol. In other words, generally speaking, emulsion flavors are thick and viscous, but simply because a flavor is viscous is no proof that it is actually an emulsion. Many tube flavors for culinary use in the home have been sold of such a strength that a certain number of drops thereof were used to replace a teaspoonful of extract. This has been objectionable, and unquestionably hindered the introduction of such products into wider use in the household.

MARKETS FOR EMULSION FLAVORS

The baking, ice cream and confectionery industries have been large users of the emulsion flavors from their very inception. In fact, some of the larger firms in these fields prepare their own emulsion flavors. The baking trade is a large user of vanilla, orange, lemon and almond. In the case of lemon and orange, the amount of alcoholic extract sold in comparison with the emulsion flavors is indeed very small.

The explanation of this condition is evident when it is remembered that a pound of lemon emulsion may contain as much oil of lemon as a gallon of ordinary extract, yet the cost of the emulsion body may have been less than ten cents as compared to \$4.50 for the alcohol in the lemon extract. Such a saving is shared with the consumer. The ice cream makers have found various emulsions particularly satisfactory. Indeed, it is worthy of note that the same emulsion that is so valuable even at the higher temperatures of the baker's oven, should prove just as pleasing in the frozen dainties of the ice cream manufacturer. The confectioner uses the various flavors mentioned above, and, in addition, some others, as peppermint, spearmint, limes, cinnamon and wintergreen. The true fruit flavors such as blackberry, raspberry, peach, strawberry, etc., are rarely furnished in emulsion form. In fact, these particular essences are so readily susceptible to deterioration that ethyl alcohol, or possibly glycerine, seems to be the only satisfactory carrier. In the case of the imitations prepared from the various organic esters, the emulsion forms of the flavors are entirely satisfactory for the confectioner. This is rather to be expected when it is considered that, in most cases, the esters are just as insoluble as the essential oils, and from their physical nature should be adaptable to the same treatment. The chewing gum industry is an allied field in which the emulsion flavors are largely employed. Manufacturers are finding that better results

are obtainable by emulsifying their flavors before addition to the chicle mass, than by adding directly.

FLAVORLESS PRODUCTS DO NOT SELL

The products referred to above are all purchased largely for their taste or flavor. They are not purchased so much for their food values as in the case of staple groceries. It may be said without exaggeration that, if foods or sweetmeats were prepared without any flavor; that is, without either an alcoholic or emulsion flavor, the demand would almost entirely disappear. The flavor is indispensable. The enormous size of these various industries is apparent to even the most casual observer. However, under present conditions of extreme shortage of sugar, such industries are the ones to suffer the most.

The manufacture of various beverages offers another outlet for emulsions. Ginger ales and orange drinks may be taken for examples. Ginger ales were formerly prepared almost entirely from alcoholic extracts of ginger and capsicum. Today the use of ginger ale paste is increasing rapidly. The chief objection to an emulsion is the turbidity that may result. However, in the case of orange beverages this is desirable, for it simulates the natural turbidity of the orange juice.

Since the thirst-quenching liquids on the market contain less than one-half of one per cent of ethyl alcohol, it is obvious that the clarity in each particular case depends on the solubility in water, or at least a suspension. It is quite probable that, if the proper aromatic constituents are emulsified in a suitable manner, the use of such flavors will become more popular. Emulsion flavors find their way into both bottled and fountain goods, as well as a variety of so-called still drinks. These still drinks, or non-carbonated beverages, include flavored ciders and imitation ciders. The beverages that are made to imitate the taste of alcoholic liquors may be considered as another example. The sale of emulsions of the citrus fruits, together with small tubes of tartaric or citric acid for preparing drinks in the home is meeting with popular approval.

ADVANTAGE OF EMULSION TYPE

The fact that the emulsion type of flavor has entered into competition with the alcoholic extract in nearly every industry to which the latter caters would seem to indicate that it has certain advantages or properties that commend it to the manufacturer and consumer. The original incentive for the development of an emulsion flavor was to avoid the use of ethyl alcohol. The

advantage of an emulsion body, costing about one-fourth as much as alcohol, or even less—especially when such an emulsion body is always available—is so obvious that it does not require further comment.

Emulsion flavors offer several distinct advantages to the manufacturer. After a certain standard formula has been adopted, the method of manufacture is relatively simple. Each formula is elastic to a certain degree, and the exact percentage of the aromatic constituent can be varied to suit the specific needs of each case.

In the course of manufacture, there is no loss of alcohol. The flavor is usually packed in small collapsible tubes or heavy wall glass bottles. There is practically no breakage in this class of bottles. The labor of filling and packing is lower than in the instance of alcoholic extracts, when the final value to the consumer is taken as the basis of appraisal.

The use of emulsion flavors finds various advantages in their employment as compared to alcoholic flavors; the flavors will not evaporate.

The economy of emulsions is of prime importance. Many bakers have maintained that oil of lemon added to a dough mass as an alcoholic extract is much more liable to loss by volatilization than when added as an emulsion. One must conclude that the inherent merit of emulsion flavors indicates an increased use in the future.

FORMULAS

The formulas employed in the past are largely inherited from pharmaceutical practice, since emulsions are employed extensively in pharmacy. Emulsions of cod liver oil, castor oil or petrolatum are well known for their medicinal properties. The literature contains a wealth of formulas and elaborate methods of production. Such formulas are usually based on small amounts of materials, and indicate the use of laboratory apparatus for the mixing. Naturally, such small capacity is of no value for commercial work. At times, the precautions and hints given in these various formulas seem foolish and valueless. Generally they will be found to represent years of experience, and are based usually on certain fundamental truths, even though the reasons given may be absurd.

The following excerpt is taken from the "National Formulary," fourth edition, as a general summary of pharmaceutical experience: "The successful formation of emulsions, whether of fixed or volatile oils, is most satisfactorily and expeditiously accomplished with acacia as the emulsifying agent. When acacia is used as the emulsifying agent,

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it is essential that the oil, the acacia and the water shall primarily be in definite proportions to each other. This proportion is four (4) parts of oil, one (1) part of acacia, and two (2) parts of water. (Liquids by measure, solids by weight.) The oil (4) and the acacia (1) in fine powder are well mixed by trituration in a perfectly dry mortar; the water (2) is then added in one portion, and the whole triturated briskly until a thick, creamy emulsion is produced; the sides of the mortar should be carefully scraped, and the mixture again thoroughly triturated so as to insure complete emulsification of the oil. During warm weather, the cooling of the oil and water will greatly facilitate emulsification. Alcoholic liquids are added last, and must be mixed previously with a portion of the water. Emulsions under ordinary conditions are prone to deteriorate on standing, and it is recommended that they be recently prepared when wanted."

The "Era Formulary" presents an accumulation of contributions to trade journals and other formulas. The following is taken from the pages devoted to emulsions: "To one part of powdered acacia in a dry mortar add 2 parts of oil, mix, then add 1½ parts of water all at once, then, with a dozen whirls of the pestle, the union is complete, as indicated by the crackling noise and change of color; then dilute with care, *ad lib.* With oils like cod liver oil, castor, etc., and balsams, one-half the quantity of acacia, or less, will answer, but if you change the quantity of acacia, you must observe the exact proportion of water, as given above, that is to be added in the first instance; *i. e.*, one-half of the combined quantities of acacia and oil."

CASEIN AS AN EMULSIFYING AGENT

"Separate the casein from milk by first adding water of ammonia—about two ounces to the gallon—to saponify

the fatty matter; after standing at rest twenty-four hours the milk is skimmed, and the casein precipitated by addition of acetic acid. The curd is collected and pressed strongly, and sodium bicarbonate, 150 grains for each gallon of milk, is added, together with sugar, about three pounds for each gallon, and the whole thoroughly mixed and completely desiccated.

"This saccharated casein may be substituted for acacia in the preparation of emulsions either of fixed oils, balsams, oleo-resins, or even volatile oils—the manipulations being the same as those ordinarily pursued. For balsams, oleo-resins and volatile oils, it is sufficient to add alcohol enough to produce a solution, and shake this in a bottle with an equal volume of a 30 percent aqueous solution of the saccharated casein, afterwards adding the remainder of the water, little by little. The emulsions are said to be remarkably permanent and to be palatable and acceptable to the stomach."

The following particulars are taken from the "Scientific American Cyclo-pedia of Formulas": "The vegetable gums, acacia and tragacanth, have been the longest in use, and the first mentioned of these has probably answered the purpose of a reliable, convenient, and at least innocuous emulsifying agent better than the majority of latter-day substitutes."

TEMPORARY EMULSION

"The late Prof. Wm. Proctor announced the proportion to be used of gum acacia to produce a perfect *temporary* emulsion. His directions were as follows: 'Mix intimately, in a perfectly dry mortar, the oil with one-half its weight of powdered acacia; to this add at once one-half as much water as the combined weight of oil and gum, and triturate briskly until the mixture has assumed the color and consistency of a thick cream, which produces a crackling noise when the pestle is moved

rapidly around the sides of the mortar.' This is the emulsion proper, and to this can be added any amount more of water or other desirable vehicle or medicament to bring the finished preparation up to the quantity prescribed."

Such examples as have been quoted illustrate the point clearly that the majority of formulas available are of an empirical nature—based entirely on experience, without any attempt to explain what actually takes place when the emulsion is formed—but may be approximately the same proportions that would be reached after a detailed scientific investigation. If, for a moment, one contemplates the marvelous advances that have been made in the various fields of technology, one becomes impressed with the fact that the successful and flourishing industries have taken advantage of every opportunity that chemical research has offered.

ADVANTAGES OF RESEARCH DEPTS.

It is true that, in some isolated cases, the advent of a research department, and its subsequent exhaustive investigation, has not changed the process employed nor the quality of the output, but it has shown intelligently why that particular method of manufacture is the best, and why the product is the best. Beyond question, such inquiries always suggest further researches which are eventually fruitful in improved products and economy of manufacture. It is obvious that an intelligent conception and manufacture of emulsions cannot be based on various arbitrary or empirical formulas, but that it is dependent on the fundamental principles of physical chemistry, and more particularly that field known as colloid chemistry. Colloid chemistry is fertile with potential possibilities, not only in the way of strictly academic problems, but also in commercial researches and technical applications.

(To be continued)

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Important Uses Found for Alkyd Resins in War Work

Production of alkyd resins and ester gums this year expected to break all records . . . What they are used for . . . New uses in civilian industries will come with them

ACCORDING to a recent estimate based on 1940-41 figures, 16 per cent of glycerine production went into the manufacture of resins. This means that tremendous quantities of glycerine were employed in making alkyd resins and ester gums during that period. Although figures are not yet available, there is good reason to believe that the production of these resins, more especially the synthetic alkyd resins, was much higher in 1942 and will be even greater in 1943. This is because alkyd resins have gone to war as important constituents of protective coatings for all types of military equipment.

COMPOSITION OF ALKYD RESINS

These alkyd resins, often referred to as glyceryl phthalate resins because they consist chiefly of the reaction products of glycerine and phthalic anhydride plus suitable modifying agents, are outstanding for the desirable properties they afford to paints, varnishes and lacquers. In lacquers, for example, alkyd resins impart increased resistance, improved adhesion and flexibility retention. During peace-time, these alkyd-containing lacquers found extensive use in coatings for automobiles, refrigerators and similar products. Used in conjunction with other resins, such as urea-formaldehyde resins, alkyds serve to increase the durability, resistance and improve other desirable qualities of the finished paints and enamels. Suitably modified with oils and other substances, these glycerine-formulated resins can be "tailor made" to fill practically any requirement or specification.

It is understandable, therefore, why these resins enter so extensively into the manufacture of the paints and enamels used by the Army to protect much of its equipment. Glyceryl phthalate type resins, for example, are specified for making rust-inhibiting primer paints. To this may be added the tremendous demand for alkyd resins by both the Navy for new ships and the Maritime Commission for new freighters to carry supplies and Lend-Lease materials. Alkyd resins are also demanded by many government aircraft specifications. Thus one typical joint Army-Navy aeronautical specification which applies to cylinder finishes calls for a glossy black, heat-resisting glyceryl phthalate enamel. Similar specifications require the use of alkyd-containing enamels for finishing or protecting other aircraft engine parts.

Indirectly these glyceryl phthalate resins are serving the war needs in other ways. For example, these resins are widely used as binders for abrasives and in special electrical insulating materials.

RESEARCH FOR CIVILIAN USE

Of course, such wide uses for essential war purposes must necessarily limit the quantities of alkyd resins for civilian use in protective coatings, textiles, paper, printing inks and the like. Nevertheless, study and developments in the field of alkyd resin application and formulation continue. One important development of this nature is the growing use of alkyd resin emulsion (or water) paints as substitutes for the oil-varnish types which require

critical materials. Their rapid drying qualities, freedom from odor and other advantages make these alkyd emulsions especially suitable for interior wall paints and as exterior paints for cinder block, concrete, cement and similar surfaces.

NEW USES IN PATENT LITERATURE

The patent literature likewise points to new uses for these resins. According to one recent patent (*U.S. Pat. 2,289,222*) use is made of a castor oil-modified glycerine-phthalic anhydride resin for producing sheer knit goods that are substantially free from snags and pulled threads. In another patent (*U.S. Pat. 2,289,266*) a combination of a phenol-formaldehyde resin and a glycerine-phthalic anhydride resin is specified in the manufacture of casting resins which form cast products that are clear and colorless. Since alkyd resins have found but little application in the field of cast plastics, this development is now and will be in the future of particular interest and value.

Waterproofing with Soap

Waterproofing wood with soap sounds far-fetched, but there is a recent *British Patent* (543,487) to vouch for it.

According to the report, the process calls for the impregnation of the wood first with a solution of the soaps of palmitic and ricinoleic acids in methyl alcohol and chlorbenzene and then with a solution of an appropriate metallic salt to form an insoluble waterproofing soap.

Soap—Rubber Cement

Rubber cements, which are used in large quantities in the manufacture of leather apparel and other articles, are often made from aqueous rubber dispersions stabilized by soap. Such dispersions, which may be made from reclaimed rubber, have the advantages over dissolved rubber cements, of being applicable to wet surfaces and of penetrating deeply into the fibrous materials being cemented. The latter property is due to the surface tension-lowering properties of soap, which permit finer division of the rubber particles and easier wetting of the material. Moreover, most aqueous rubber cements are non-inflammable and avoid the poisonous and unpleasant odor of organic solvents.

An adhesive (and waterproof) that should be of interest in these days, because of its low rubber content, utilizes a synthetic resin as its main source of stickiness. This resin (cumar resin, for instance) may be used with an equal quantity of asphalt to total 40-45 per cent of the emulsion. The adhesive also contains 6-9 per cent rubber, 0.8-1.2 per cent soap, about 1.3 per cent clay, and the remainder water (*U.S. Pat.* 2,175,797).

A SYNTHETIC RUBBER AS A CEMENT

A synthetic rubber, chloroprene, has been suggested as a cement (*Brit. Pat.* 495,263). A chloroprene emulsion, which may itself be made from a chlorinated hydrocarbon emulsified in soap water, is first deodorized by extracting with a cheap hydrocarbon solvent and is then mixed with soap to yield what is claimed to be a superior leather cement.

Another adhesive containing an auxiliary cementitious material, together with soap, rubber, spindle oil, and water is described in *U.S. Pat.* 1,719,948. A resinous polymer, such as the paracurmarone or para-indene type (20 parts), is melted and mixed with a non-volatile mineral oil, such as spindle oil (14), and then emulsified with a solution of soap (.5) in water (250). This emulsion is added to 100 parts of thickened 33 per cent rubber latex, natural, synthetic, or artificial.

An interesting rubber-benzene emulsion in water demonstrates the versatility of soap as a dispersion stabilizer (*U.S. Pat.* 1,793,983). One hundred volumes of a 5 per cent solution of rubber in benzene are emulsified in 40-50 volumes of water or glycerine (itself, curiously, a by-product of the soap industry) in the presence of $\frac{1}{4}$ per cent sodium oleate soap. This cement may also be used in waterproofing fibrous materials.

Still another formula may be pre-

sented to indicate the general principles of soap-rubber cement preparations. According to *U.S. Pat.* 1,938,078, an excellent rubber cement, also suitable for adhesive tapes, may be made from a combined rubber and spindle oil dispersion in soap water. One hundred parts of a spray-dried, formaldehyde-preserved latex are worked in a milling machine with 0.5 parts of spindle oil and then transferred to a heated mixer. Stearic acid (12 parts), water (9), and dry sodium hydroxide ($1\frac{1}{2}$) are added. The acid and alkali react chemically to form soap, which permits the rubber and oil to be dispersed in the water. Additional water (4.5 parts) is worked in, resulting in a dispersion of high rubber concentration which can be diluted easily to 20-40 per cent solids, a concentration suitable for shoe cements.

Irritation from Soap

The irritating influence of soap on the skin has been the subject of a series of experiments by I. H. Blank,¹ in the course of which a number of interesting facts became clear.

Saturated fatty acids of low molecular weight produce more positive skin reactions than do acids of high molecular weight. To those of low molecular weight both normal and diseased skin reacts to a similar degree, but to those of a molecular weight higher than that of capric acid, normal skin reacted with less frequency than diseased skin.

Oleic acid showed positive reactions as frequently as saturated fatty acids of high molecular weight. The mixed fatty acids of castor oil showed positive reactions less frequently. Lauric acid caused a stronger reaction at pH-7 than at pH-5, showing no reaction at pH-3.

Also in case of palmitic acid no reactions were caused at pH-5 and pH-8.

From his experiments Blank deducts that in soaps neither the alkali nor the fatty acids alone are responsible for irritation of the skin, but that both materials contribute to it, each in its own way. The higher the molecular weight of the fatty acid, the more alkali is required to produce irritation. In 150 cases of skin disease, soap was replaced by a mixture (pH 6.5) of 25 per cent sulfonated olive and tea seed oil, 25 per cent liquid petrolatum, and 50 per cent water. In less than ten instances, skin irritation was observed after application of this mixture. In 18 cases where relief was afforded upon application of the oil mixture, relapses followed when soap was again used. Sulfonated oils should not be considered as having a therapeutic value but they definitely seem to represent suitable substitutes for some soaps.

In this connection it might be well to refer also to the experiments of B. E. Emery and L. D. Edwards² who, on the basis of a method they devised, found that soaps made of lauric and myristic acid have a more irritating effect on the skin than other soaps, that potassium soaps irritate the skin more than the corresponding sodium soaps, and that pure sodium alkyl sulfonic acids have less irritating effect on the skin than the corresponding sodium and potassium salts of the saturated fatty acids $C_{12}H_{25}$. Sodium lauryl sulfonate is most frequently the cause of skin irritations, followed by sodium myristyl sulfonate. Sodium chloride and sodium sulfate increase the irritating effect considerably.—*Schimmel Briefs*.

¹ *Ch. Abs.* 33-39-5490.

² *Dr. & C. Ind.* 45-39-300.

Soap Kettle Consumption of Fats and Oils Under M-71 and FDO-42

Based on U. S. Census reports in thousands of pounds. Fats and fatty acids from fats not reported by the Census.

	3rd Quarter	1942	4th Quarter	1943	1st Quarter
Inedible tallow	280,170		286,214		267,457
Grease	82,056		87,646		110,690
		362,226		373,860	378,147
Coconut oil	25,173		16,802		16,121
Babassu oil	5,795		2,926		2,457
Palm kernel oil	225		46		110
		31,193		19,774	18,688
Palm oil		9,011		5,418	4,777
Olive oil, inedible	48		84		131
Olive, sulphur oil or olive foats	1,008		1,332		1,160
		1,056		1,416	1,291
Fish oil	9,178		16,813		10,669
Marine mammal oils	7,723		1,863		7
		16,901		18,676	10,676
All other oils		10,775		8,001	2,132
Total		431,162		427,145	415,711

U.S.I. CHEMICAL NEWS

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A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries



1943

Vitamin B₆ Synthesis Requires the Use of Ethyl Acetone-Oxalate

Production of Pyridoxin Aided by U.S.I. Compound

A new synthesis of Vitamin B₆ (pyridoxin) that has just been published requires the use of ethyl acetone-oxalate (ethyl acetyl-pyruvate — $\text{CH}_3\text{COCH}_2\text{COCOOC}_2\text{H}_5$), a compound which offers many interesting possibilities for experimental work.

The ammonium derivative is first prepared according to the method of Mumm and Bergell [*Berichte* 45, 3041 (1912)] and this is then combined with cyanoacetamide according to the method of Bardhan (Journal of the Chemical Society, page 2227 (1929)) to give ethyl 2-methyl-5-cyano-6-hydroxy-pyridine-4-carboxylate. Ammonia in methanol gives the amide which is reacted with phosphorus oxychloride to give 2-methyl-4, 5-dicyano-6-hydroxy-pyridine. By means of nitric acid, the 3-nitro derivative is obtained which is reacted with phosphorus pentachloride to give 2-methyl-3-nitro-4, 5-dicyano-6-chloro-pyridine. Hydrogen reduction converts the 3-nitro compound to the 3-amino from which is obtained, by reacting hydrochloric acid in methanol, 2-methyl-3-amino-4,5-diaminomethyl-pyridine-trihydrochloride. Sodium nitrite with hydrochloric acid gives the hydrochloride of Vitamin B₆.

Sample quantities of ethyl sodium acetone-oxalate may be obtained by writing U.S.I.

Emulsifying, Foaming Agents Produced from Soybean Oil

A new method for producing emulsifying and foaming agents, together with phosphatides, from soybean oil was described in a recent patent.

The inventor suggests that compounds containing phosphorous be removed from the soybean oil by passage through an absorbent such as silica gel. The absorbent may then be (a) extracted with acetone and evaporated, the sterols removed, and the residual oil again passed through the absorbent, or (b) the absorbent extracted with acetone and then with diethyl ether, giving a good grade of phosphatide. The residue is next extracted with 99-99.5% ethanol, giving a sterol glucoside, and the remainder extracted with 20-70% ethanol to produce a foaming agent soluble in dilute aqueous alkali and precipitated by aqueous hydrochloric acid or aqueous sulfuric acid. Phosphatide-rich material (an oil-free viscous liquid soluble in diethyl ether, ethanol and acetone and insoluble in water-ethanol) is obtained from this last step by evaporating the water-ethanol extract to quarter bulk and skimming off the floating gum.

Ethyl Chloride Recovery

According to a new method recently patented, ethyl chloride can be recovered from the eutectic mixture of ethyl chloride-butane obtained in the manufacture of tetraethyl lead upon treatment under pressure at -10° to 30° with an aqueous solution of an alcohol such as 70% ethanol.

Ethyl Formate Used in Synthesis Of Sulfadiazine and Thiamin

Highly Reactive Ester Produced by U.S.I. Employed In Condensation Step of Two War-Important Products

Ethyl formate, a very reactive ester which heretofore has been used chiefly in the production of fumigants, is now being employed in substantial quantities for the synthesis of thiamin (Vitamin B₁) and sulfadiazine, one of the newer sulfa drugs. Both of these products, now filling vital war needs, will undoubtedly play an increasingly important part in the advancement of peacetime medicine.

Reducing Compounds Detected Rapidly with Spot Tests

A test for the rapid detection of reducing compounds which can be carried out with small amounts of material in the form of spot reactions was described in a recent issue of "The Chemist Analyst."

The following procedure is recommended: place one drop of the solution, or several granules of the solid substance, in one of the cavities of a spot plate and add one drop of an approximately 5% solution of phosphomolybdic acid in water or ethanol. In the case of difficult soluble compounds, a drop of dilute sulfuric acid can be added if necessary. In the presence of reducing compounds there is formed, in proportion to their amount, a blue or green coloration. A blank test is required only when very small amounts of the reducing substance are present.

New Process Patented for Paper, Cloth Coating Material

EAST ORANGE, N. J.—A patent has been awarded to an inventor here for a method of preparing paper and cloth coating materials from cashew nut shell liquid said to produce resistant, infusible and insoluble films. A suggested use is for coating paper to be used as liners for the caps and covers of containers for food, cosmetics and paints.

A typical coating is prepared by heating together about three parts by weight of cashew nut shell liquid and one part of hexamethylene tetramine to about 250° F. After holding at that temperature for about thirty minutes, two parts of a fifty per cent solution of an organic solvent soluble urea-formaldehyde resin in equal parts of butanol and xylol, and four parts of a petroleum spirits are added.

The extensive use of thiamin in supplying certain body deficiencies is well known and its importance is becoming more apparent each day. It is, for example, an ingredient of the concentrated chocolate bars issued to soldiers as part of their emergency rations.

Sulfadiazine, while exhibiting the same bacteria-killing action of the other sulfa drugs, has been found to cause less reaction than some of the others. Tablets of sulfadiazine are included in soldiers' first aid packets.

Synthesis Is Similar

The synthesis of thiamin and sulfadiazine follows a similar pattern. In the synthesis of the pyrimidine part of thiamin, ethyl formate is condensed with ethyl beta-ethoxy propionate. This is a typical Claisen condensation with sodium which gives ethyl beta-ethoxy sodium formylpropionate. This product on condensation with acetamide hydrochloride, yields 2-methyl-4-hydroxy-5-ethoxy-methyl-pyrimidine. The hydroxyl group in the 4 position is converted to the chloride by phosphorus oxychloride, and finally into the amino group by ammonia in alcohol. After replacement of the ethoxy group with bromine by action of hydrobromic acid, the pyrimidine part is condensed with the thiazole part to give thiamin.

The synthesis of sulfadiazine actually requires another U.S.I. product, ethyl acetate, as well as ethyl formate. The first step here again involves a Claisen condensation. The ethyl formate is condensed with ethyl acetate in the presence of sodium ethoxide to produce ethyl sodium formylacetate. The remainder of this synthesis consists of condensing the ethyl sodium formylacetate with guanidine to the hydroxypyrimidine, which is then treated with phosphorus oxychloride and hydrogen in order to substitute hydrogen for the hydroxyl group. In the last step, the pyrimidine is

(Continued on next page)



Photo by U. S. Army Signal Corps

Thiamin and sulfadiazine, which are being synthesized with U.S.I.'s ethyl formate, guard the health of soldiers at the front. Shown at left are emergency field rations for the Army, included among which is a concentrated chocolate bar (Ration D) containing thiamin. At right is a front line first aid station where sulfadiazine is administered to prevent infection.



Ethyl Formate Uses

(Continued from preceding page)

combined with sulfanilyl chloride to give 2-sulfanilamido-pyridine (sulfadiazine).

These uses of ethyl formate again show the diversified applications for such organic chemicals, and the typical reactions in which they are used. The impetus of war needs is resulting in many new synthetic chemicals, especially for medicinal purposes. As illustrated here, the Claisen condensation reaction is extremely important in many of these syntheses. U.S.I. has had years of experience with this reaction in the production of ethyl acetate and ethyl sodium oxalacetate. This company is undertaking the development of other chemicals for similar syntheses which will undoubtedly find a role in the manufacture of hormones, amino acids, vitamins, insecticides and new chemo-therapeutics. U.S.I.'s technical staff will collaborate with any organization whose products call for intermediates obtained by the Claisen type reaction.

Describe Method for Making Air-Drying Ink Vehicle

DOVER, Del. — A patent has been awarded to a company here for a non-oily air-drying vehicle to be used in the formulation of vitri-fiable inks that is claimed to offer many advantages over oil vehicles.

The following mixture is recommended:

	Parts
Copaiba resin	32
Venice turpentine	16
Molasses	4
Dammar (crystal dammar varnish)	4
Dibutyl phthalate	1/32

The vehicle is prepared by mixing together and stirring slowly the copaiba resin, Venice turpentine and dibutyl phthalate. To this mixture is added the molasses and dammar. The powdered solids are then added and mixed to produce a finished ink or color.

New Formula Devised For Topical Anesthetic

The following formula has been suggested for a topical anesthetic:

Benzocaine	7.5
Oil of peppermint	6.0
Phenol crystals	3.5
Ethylene glycol, q.s.	50.0

The inventor suggests that the benzocaine, oil of peppermint and phenol crystals be mixed in a flask and heated until the benzocaine dissolves, and sufficient ethylene glycol be added to make 50 cc.

Butanol, Glycerine Mixture Declared Best Soap Solvent

A mixture of 56% of glycerine and 44% of butanol was found to be the most effective solvent for soap, following recent tests in which the solubility of sodium stearate was determined at 25° C. in various mixtures of ethylene glycol with different monohydric alcohols; of butanol with different glycols and glycerine; of chloroform with glycols, and of acetone with ethylene glycol.

It was discovered that for the same glycol, the percentage of different alcohols required to produce maximum solubility is between 40 and 45, except for methanol which was 60%. For a single solvent or mixture to be a good soap solvent, the experimenters say it must have two adjacent hydroxy groups and a hydrocarbon-dissolving portion.

Purification Advised for Use Of Fibrous Sodium Pectate

Recently developed as a substitute for agar in bacteriological gels, fibrous sodium pectate is claimed to be more satisfactory for such use when purified. To achieve purification, it is suggested that the material be suspended in 60% ethanol and pH adjusted to 7.5. The pectate is then filtered and dried in a vacuum at 60° C.

Transparent Sheet Materials Made With Aid of Acetone

A new method has been patented for the manufacture of transparent or translucent sheet materials. An open-work fabric—wire netting, woven-wire fabric, knitted or leno fabric of organic derivatives of cellulose—is wetted with a mobile, volatile liquid such as acetone. It is then treated with a dope compatible with acetone and containing a lacquer base. The solvent is removed by evaporation and the product calendered.

Chloroformic Esters Used To Treat Cellulosic Fabrics

A process for permanently imparting water repellency to cellulosic fabrics was recently patented which comprises reacting a chloroformic ester of ten carbon atoms or more with hexamethylenetetramine directly on the fabric in the presence of heat and an inert solvent. A number of chloroformic esters have been produced by U.S.I.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

An organic alkyl peroxide is offered for use as a catalytic agent in one or two phase polymerizations, as an oxidation agent for laboratory use, as a drying accelerator, and as a bleaching agent. Described as comparatively stable, it is standardized at concentration of 50 to 60% with more than 10% available oxygen. (No. 710)

U S I

A grinding, mixing or compounding mill has been developed for relatively small or moderate size batches of wet or dry material. (No. 711)

U S I

A photoelectric gloss meter has been developed for measuring the reflecting ability of a finished surface in terms of per cent of an arbitrary standard such as a mirror. It consists of a galvanometer with connection switches and adjusting controls and a photoelectric search unit. (No. 712)

U S I

Deodorant oils are offered which the maker says can be readily mixed with formaldehyde and water in proved proportions. It is claimed that deodorants so made will kill all tobacco, cooking, theatre and tavern odors. (No. 713)

U S I

A line of paints for machinery and building interiors is offered that can be applied by brush or spray on wood, brick, plaster and metal surfaces. Included are a mill white flat, a mill white gloss enamel, commercial interior gloss and semi-gloss enamel, commercial interior flat, dado enamel, machine enamel, a primer, an undercoat and a thinner. (No. 714)

U S I

Direct current resistance decodes have been developed with ranges of 0.9 to 999,999 ohms total and accuracy of plus or minus 1% and 0.1%, respectively. Switches are described as having self-cleaning, multi-bladed phosphor bronze spring wipers. (No. 715)

U S I

Tempered glass tubing is offered which is said to be suitable for handling all types of corrosive fluids except hydrofluoric acid and strong, hot caustic soda solution. (No. 716)

U S I

A strainer for handling highly viscous liquids or liquids that are solid at room temperatures has been announced. Maximum operating pressure is 50 psi at temperature of 600°F. The bottom and sides are completely enclosed in a steam jacket suitable for 125 pounds pressure. (No. 717)

U S I

Two water and stain-repellent materials are available to treat clothes by dipping after washing or dry cleaning. One is an emulsion that is diluted with water, the other a solvent type. (No. 718)

U S I

Skin-protecting creams are offered which are described as non-clogging, non-toxic, and non-irritating. One is recommended for protection against skin absorption of paints, lacquers, tars, resins, glues, graphite and other materials. The second is insoluble in cutting oils or soluble oil emulsions. It is said to afford protection against strong or dilute acids and alkalis, metallic salts, dyes and coal tar distillates. (No. 719)

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Vacatone

New Products, Ideas and Processes

Laying floors and patching

For laying a quick, inexpensive, resilient, waterproof floor or patch over any surface Hercules Speedy Patch is offered by the Evercrete Corp. It may be used on any material, damp or dry, according to the maker. It is ready for use and is self healing and may be used as a completely new surface without chipping or tearing up the old. It is applied with a putty knife or a mason's trowel. It is sold in one gallon containers.

Tumble jar

For tumbling, mixing, blending, dispersions—liquids or powders—a small size hand-operated tumble jar is offered by E. Machlett & Son. The overall dimensions are 13½x15 in. and it is 15 in. high. It has a pressed steel base and the heavy molded glass jar has a capacity of 1½ gals.

How gage blocks work

The theory of gage blocks and how they are made and used is explained graphically in four new 35 mm. sound films which are offered for presentation before plant superintendents, foremen, etc., by the Savage Tool Co. The four films give a presentation lasting over an hour and a half and are designed to remove the mystery and misunderstanding prevalent in industry about these modern aids to industry.

Stopping condensation drip

For stopping drip from condensation in stores, factories and warehouses NoDrip is offered by the J. W. Mortell Co. It is a plastic cork coating that is applied with a brush, trowel or spray, is claimed to stop dripping from condensation or sweating pipes, tanks or walls.

New soap base

A new, heavy-bodied liquid soap for the preparation of soap shampoos and liquid toilet soaps and as a base for scrub soaps is announced by the National Oil Products Co.

Waterproofing and rustproofing

An acid resisting, waterproofing compound known as Acid-O is offered by the George B. Klee Co. for renewing old, worn out metal containers and equipment usually considered junk as a result of rust and leaks. With it, it is claimed, such containers and equipment can be made water tight for long

periods of additional service. It is also said to be useful in preserving equipment and containers usually damaged when exposed to the air. It is packed in quart, gallon and five gallon containers and is applied with a brush.

Vermont apple syrup

The Cary Maple Sugar Co., Inc., one of the largest producers of maple syrup, is to begin the experimental production of apple syrup, this autumn. It is expected that the daily output will be 15,000 lbs. of apple syrup. As reported by *Food Materials*, apple syrup glycerine substitute is made from native apples of low grade. The apples are pressed and the resulting juice treated with lime, heated to 175 degrees F., filtered and acidulated with sulfuric acid. The pectin in the juice is then precipitated out and the juice concentrated to a density of 65 to 75 per cent solids to prevent fermentation. The finished syrup is a sweet practically flavorless product with desirable moisture stabilizing properties.

Pay-as-you-go taxes

All about pay-as-you-go taxes including the CCH internal revenue code service is given in the CCH Federal tax guide service according to the Commerce Clearing House Inc. It is a loose leaf service that is kept up to date. The service includes bulletins of flash tax news covering new rulings, decisions and legislative and administrative changes.

Unloading glass containers

For unloading glass bottles, jars or other glass containers speedily with a minimum of breakage the Island Equipment & Supply Co. offers the Styl-O-Matic straightline infeed and unscrambling table. It is stated that one operator can unload with it from 60 to 150 bottles or jars of any size per minute from cartons onto the conveyor which discharges them to the filler conveyor in a single line.

Waterproof adhesive

A new series of water-resistant and waterproof glues, pastes and cements with various working qualities to suit the newer types of export packing materials has been developed by Paisley Products Inc., 1770 Canalport Ave., Chicago, Ill. The adhesives have many uses, it is stated, ranging from sealing solid fibre shipping cases to attaching labels.

Glass sealing cement

Almost all needs in the laboratory for such every day jobs as sealing glass, metal and porcelain, attaching metals to lathe faces, producing air tight joints, sealing bottles, etc., are satisfactorily met with Pyseal, a high melting point sealing cement announced by the Fisher Scientific Co. It is stated that the cement is not brittle and does not crack.

Sodium cellulose glycolate

Water soluble cellulose, sodium cellulose glycolate, a gelatin substitute developed in Germany, is now finding wide application in that country in place of scarce, ordinarily imported materials such as gum Arabic, agar-agar, caragheen or Irish moss, gum tragacanth, cherry gum, carob gum and gluten. More than 40 different preparations are now being manufactured by six German concerns. Use is also being found for it as a stabilizer in the food industry, according to the Dept. of Commerce.

Corrosion protective coating

A new protective coating for extremely corrosive conditions known as Ucilon is announced by United Chromium Inc. It is stated to be formulated with new and improved synthetic resins and produces tough, flexible coatings that are resistant to organic and inorganic acids, alkalis, salts, alcohol, gasoline, oils and moisture and may be readily applied to metal, wood or other surfaces by brushing, spraying or dipping. Ucilon F is a special formulation for use in contact with food products.

New hydro colloids

Two new hydro colloids, derivatives of the domestic sea moss industry, are offered by the Krim-Ko Co. They are said to successfully replace agar, gums and pectins in innumerable laboratory and plant operations. One is Krimko Gel to replace commercial gums, pectins and gelatins and the other is Car-rager to replace bacteriological agar.

New non-critical plastic

A new non-critical plastic made from redwood is announced by the Sheller Manufacturing Corp. It is said to embody in one composite form both resin and filler and is readily adaptable to compression molding.

Greaseproof paper for cans

A flexible greaseproof paper formed by an impregnation and coating process is offered by Herman Scott Chalfant, Inc. It is said to be especially serviceable in making paper cans.



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Books of the Industry to Aid You

PRACTICAL EMULSIONS. *H. Bennett.* 6x9 in., 462 pages, *Chemical Publishing Co.* 1943. Price \$5.

This useful handbook of emulsions, emulsifiers and methods of formulating and making emulsions of practical value in industry was written by the editor-in-chief of the *Chemical Formulary*. It is the first book which specifically deals with emulsions for the practical worker. For that reason it touches only lightly on theoretical aspects. A good idea of the contents of the book may be had from the following chapter headings: Emulsifying Agents, Types of Emulsions and Foams, Methods, Formulation, Equipment, Stability, General Technical Emulsions, Dispersing Agents, Wetting Agents, List of Emulsifying Agents, List of Emulsions, Demulsifying and Defoaming Agents; Agricultural Spray Emulsions, Cuttings Oils, Soluble Oils, Miscible Oils, Emulsifying Agents, Bituminous Emulsions, Cleaners and Soaps, Cosmetics and Drug Emulsions, Defoaming Agents, Food Emulsions, Gasoline Emulsions, Lacquer Emulsions, Leather Treatment Emulsions, Lubricant Emulsions, Medicinal Emulsions, Paint Emulsions, Paper Processing Emulsions, Polish Emulsions, Resin and Rubber Emulsions, Textile Emulsions, Waterproofing Emulsions, Wax Emulsions and Dispersions.

Specific examples in sufficient detail are included in the book to enable the beginner to learn readily the how and when and where of emulsions. The correlation of known information and the inclusion of hitherto unpublished material promises to be useful even to the specialist.

NEW CHEMICAL FORMULARY VOL. VI. *H. Bennett, F. A. I. C., editor-in-chief.* 6x9 in., 636 pages, *Chemical Publishing Co.* 1943. Price \$6.

A staff of 75 from various universities and from industries cooperated to bring this useful collection of practical commercial formulae and recipes for making thousands of products in many fields of industry fully up to date. This volume contains formulae not included in the previous five volumes. Special elementary formulae of direct and indirect military interest have been included and a chapter on substitutes for scarce materials is a useful innovation. An enlarged directory of sources of chemicals and supplies has been added and a chapter on substitutes adds to the timeliness of the book. Useful tables are also included. Among the

chapters are: Beverages, Cosmetics and Drugs, Emulsions, Food Products and Soaps and Cleaners. About 50 pages are given to cosmetics and drugs. Other chapters cover Adhesives, Farm and Garden Specialties, Hides, Leather and Fur, Inks and Marking Materials, Lubricants and Oils, Materials of Construction, Metals, Alloys and Their Treatment, Paint, Varnish, Lacquer and Other Coatings, Paper, Photography, Polishes and Abrasives, Pyrotechnics and Explosives, Rubber, Resins, Plastics and Waxes, etc.

ROGER'S MANUAL OF INDUSTRIAL CHEMISTRY. *Edited by C. C. Furnas.* Two volumes, 1685 pages, 501 illustrations, 45 chapters. *Written by a large group of contributing specialists.* Sixth edition. Cloth, 6x9 inches. *D. Van Nostrand Co.* 1942. Price \$17.00 for set of two volumes.

Practically every industry throughout the entire range of applied chemistry is discussed by specialists in their respective fields. This manual is one of the reliable books found in almost every library, industrial and otherwise. From the beginning, it was an authoritative book—it still is.

From the toilet goods point of view, only a few chapters are of direct interest, but many are of indirect value. There is much to be learned from reading the chapters on "water for industrial use," "surface coatings" and "soap and glycerin." Also of considerable application are the chapters entitled: Industrial Solvents, Synthetic Plastics, Application of Dyestuffs, The Manufacture of Pharmaceuticals, Starch, Sugar, Casein and Allied Materials, Natural Oils, Fats and Waxes, Cellulose Industries and Natural Resins, Gums and Gum Resins.

The only serious oversight from this reviewer's point of view is the absence of a discussion of the toilet goods industry which certainly qualifies as an applied chemical industry. Flavors also have been overlooked. But these are slight faults in a manual so large.

All of the contributors are experts. Their vast knowledge has been put down for reference for all time. One of the authors (C. Ellis) died some time ago.

Of tremendous value to the beginning chemical manufacturer, this book also gives excellent data on plant layout, chemical synthesis, both organic and inorganic, and equipment required for plant production. Every library should have this manual.—*M. G. deN.*

THE SELF-EXAMINER IN THEORY AND PRACTICAL COSMETOLOGY. *Anne Murray, R. N.* 96 pages, paper covers. *Anne Murray Publishing Co.* Price \$1.

This useful book contains 2000 true and false questions and answers covering every phase of cosmetology. It is especially valuable as a companion volume to the author's "Theory of Cosmetology." Its arrangement is designed to be especially helpful to those preparing for state board examinations.

GLUE AND GELATINE. *Paul I. Smith.* 5½x8½ in., 145 pages, 10 illustrations. *Chemical Publishing Co.* 1943. Price \$3.75.

The author is well known to readers of *THE AMERICAN PERFUMER* for his numerous authoritative contributions on the literature of soap. This volume should prove to be of use in almost any industry because it covers raw materials, manufacture and application of glue and gelatine. An idea of the contents may be had from the following chapter headings: Early History, Histology of Skin and Fibre Structure of Protein, Introduction to Chemistry of Protein, Raw Material for Glue and Gelatine, Preliminary Processes, Extraction of Gelatine from Glue Stock, Filtration, Clarification and Addition of Chemicals, Evaporation, Recovery and Purification of Bone Fat and Skin Greases, Properties and Qualities of Glue and Gelatine, Plastics for Gelatine Plant Construction, Glue as an Adhesive and Miscellaneous Applications, Gelatine for the Photographic Industry, etc.

GLASS, THE MIRACLE MAKER. *C. J. Phillips.* 6x9 in., 436 pages, 264 illustrations, diagrams, charts and tables. *Pitman Publishing Corp.* 1942. Price \$4.50.

This book is intended primarily for the chemical engineer, the designer and others who see in glass a unique and versatile material full of unexplored possibilities for creating products and improving production methods. As it is necessary to have more than a superficial knowledge of the characteristics of glass to apply it intelligently to new problems the author endeavors to furnish an accurate, up-to-date and reasonably comprehensive account of its technology and numerous applications. Emphasis throughout has been put on the practical aspects. Part I is divided into ten chapters covering the history and technology of glass including its chemistry and mechanical and other physical properties and the principles of glass making. Part II contains seven chapters on applications. For general readers it is a complete and understandable story.

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Our Washington Correspondent Reports to You

by ARNOLD KRUCKMAN

War slowly moving in on the cosmetic industry

The war is slowly moving in on this industry. Order L-103-b restricting the use of glass containers came out of WPB July 1; a day or two before the National Bureau of Standards formally announced that the industry had voluntarily approved the simplification of paper boxes for toiletries and cosmetics; and earlier in June L-239 as amended by WPB was issued to set up certain controls on folding and set-up boxes. Further reduction in quotas of pepper and cinnamon was ordered by the War Food Administration late in June. But one of the most troublesome subjects has not yet been settled, being under protracted discussion by various Government agencies: peppermint.

Anomalous peppermint oil situation approaching the boiling point

The peppermint problem has been slowly approaching a boiling point for months. The OPA price ceiling on peppermint products practically placed the essential oil houses in the position of selling peppermint oil as an accommodation, not for profit. The more or less leisurely survey conducted by OPA to find a basis for price ceiling adjustments apparently produced only more uncertainty. The need for domestic menthol and the pressure of the British for a supply of peppermint oil forced the problem into a situation that made it necessary for the Government people to come to some decision. Lend-Lease and BEW combined in interdepartmental meeting to secure a decision in behalf of the British. Representatives of the various domestic and permanent Government agencies were so reluctant to approve the Lend-Lease and BEW formulae that more interdepartmental conferences had to be held. The most recent was a comprehensive intra-Governmental meeting called under the aegis of the Department of Agriculture and headed by Dr. A. L. Kalish, the essential oils specialist of the Special Commodities Section

of the Food Distribution Administration. This conference crystalized the position of the various conflicting interests. It developed the British demand another 200,000 pounds peppermint oil. Our own menthol industry has already purchased some of the peppermint crop and wants more peppermint oil for pharmaceutical uses. The flavoring, beverage, candy, and food industries of the United States seek approximately something approaching their usual supply. The total peppermint oil produced in 1942 exceeded 1,400,000 pounds. All but a small percentage was absorbed by the flavoring, beverage, candy and food industries.

This year the total volume is not expected to exceed 1,200,000 pounds. The British demand at least 200,000 pounds, and our own food industries declare their minimum needs are 1,000,000 pounds. Patently this would leave nothing for the pharmaceutical people. They need approximately 1,000,000 pounds because the conversion of peppermint oil into menthol shrinks the volume of peppermint oil by one-half. The 1,000,000 pounds would produce 500,000 pounds of menthol. The problem is to make 1,200,000 pounds of peppermint oil supply a demand for 2,200,000 pounds of the product.

Demand for our menthol new to British and U. S. menthol makers

The situation is novel because both the demand from the British and from our menthol makers is new. We have once before during this war supplied the British with approximately 200,000 pounds of peppermint oil, via Lend-Lease; but the menthol people are new clients. As is well known, menthol hitherto was provided by the Japanese, or was made from the essential oils brought from the Dutch East Indies and similar sources. The last of this stock was used up last year. Now the cupboard is bare, and the pharmaceutical people in this country want their supply from the materials grown in this country that may be converted. Apparently peppermint oil is the only

product that can be converted. Both the food industries and the pharmaceutical industries are substantial segments of our national economy. They feel their domestic needs are equally important, and both naturally have legitimate influence among the members of the Congress. It is by no means a simple headache for the Department of Agriculture and the Food Distribution Administration.

Raising of peppermint is essential; production of oil is not

There are other complications. As an agricultural product, the raising of peppermint has been classified as essential. But as a product with no direct or immediate use in the war, the National Research Council, the grave and reverend signors of science, has decided peppermint oil, the product of the peppermint plant, is NOT essential. The idea is that we would not starve without it. The U. S. P. lists menthol, and the assumption is that any pharmaceutical product listed by the U. S. P. is an essential for the health and welfare of the people. But the word is that the National Research Council apparently does not regard menthol as an essential drug with therapeutic virtue, intimating that 10,000 pounds would take care of all urgently essential needs.

Of course, actually this is one of those borderline cases when the thing that may not be starkly essential for realistic purposes of war, just the same is very essential for the purpose of sustaining the morale of those who fight the war on the battlefronts and behind the lines. This is the primary and almost sole basis of the demand by the British for our peppermint oil. They declare they need it to flavor the confections and the foods so overwhelmingly popular among the rank and file of the British people. They further bolster their demand by the assertion that they need our peppermint oil because it is required for the chewing gum they will manufacture for sale to our soldiers and sailors in Europe and

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Africa and elsewhere. There seems no doubt that peppermint oil is considered by the British and by our people most sincerely and seriously as an important element in sustaining morale. It may not be academically essential, but realistically it is deemed utterly essential by the hardheaded British as well as by our own experts.

There is that old saying that what is good for the goose is good for the gander. Our own industrialists will undoubtedly impress upon members of the Congress that if the peppermint oil is as essential for the British as is set forth by Lend-Lease and BEW, it is just as essential for our own people. The British want 200,000 pounds for the use of a population of 40,000,000. Our population, plus our special food needs, would probably total four times as much as the British in population equivalents. This would seem to place our needs at a minimum of 800,000 pounds for food uses. The menthol manufacturers obviously would get only 200,000 pounds peppermint oil to make 100,000 pounds menthol. They want 1,000,000 pounds. This is the problem Dr. Kalish and his associates in other branches of Government must solve. In the not remote future Kalish, who does Lend-Lease buying of essential oils and similar commodities, will undoubtedly send a questionnaire on the subject to those who deal in peppermint oil. Kalish is a realistic person who has had experience in business. Under his leadership the solution will be practical. Incidentally his working force has expanded considerably since he came to Washington last winter. He began alone, with a stenographer. He now has the help of chemists, analysts, statisticians, economists, and other experts. If you deal in any of the things or problems connected with essential oils you should become thoroughly acquainted with the Kalish activities.

Indications that there may be more glass container restrictions

Your friend, Deputy Chief C. A. Willard of the Drugs and Cosmetics Branch in WPB feels the industry has little to complain about in the Glass Container Order L-103-b. It is true the quota is fixed at 65% of the number of containers you used either from July 1 to October 31, 1942, or from January 1 to December 31, 1942. To be exact the quota you may use from July 1 to October 31, 1943, is based upon the number of glass containers you accepted between the dates in 1942. Under the order the operation under the quota is restricted to the four months from July to next November. On the face of it there would seem to be some hope that normal deliveries and

supplies might be resumed in November. But it is not expected there will be any modification at the expiration of this present four-month period. Indications are that there might even be further restrictions. The inference is that it would be wise to save the real moans until this period expires. The order reads: "During July, 1943, no commercial user shall accept delivery of more than 35% of his quota. During August, 1943, no commercial user shall accept delivery of more than the following portion of that quota: 60% of that quota minus the number of containers accepted by him against that quota during July, 1943. During September and October, 1943, he may accept delivery of whatever portion of that quota he did not accept July and August, 1943. If the amount permitted for acceptance during either July or August, 1943, is less than a carload, he may accept up to a carload during such month, provided that amount is within his quota for the class of products listed. This paragraph shall not be construed as in any way increasing the amount of any quota.

Total capacity of all empty new glass containers not to exceed 140%

"The total capacity of all empty new glass containers accepted by any commercial user during the quota period . . . shall not exceed the following maximum: (1) 140% of the total capacity of the number of empty new glass containers and metal cans accepted by him for that class of listed product during the A Base Period; (2) 140% of the total capacity of one-third of the number of empty new glass containers and metal cans accepted for that class of listed product during B Base Period. Capacity shall be computed in terms of gallons or pounds, whichever is the customary measure.

"No commercial user shall accept delivery of over 1/2 gallon or larger empty new glass containers for packing any class of listed products than the following maximum: (1) the total number of all such sizes of empty new glass containers and metal cans for that class during A Base Period or if he has chosen B Base Period for computing his quota, (2) one-third of all such sizes of empty new glass containers and metal cans accepted for that class of listed products during B Base Period.

"Restrictions do not apply to any commercial user who accepts no more than a total of \$1,000 worth (cost price to him) of empty new glass containers for the entire quota period. The Order does not apply to containers in transit on July 1, 1943, or to containers set aside before July 1, 1943.

"Any commercial user who uses glass

containers at more than one plant may choose to compute and apply a separate quota for each plant or groups of plants, or a collective quota for all plants." Handblown glassware is exempt from the order.

There is no quota on deliveries of wares in containers sold to Army, Navy, Maritime Commission, War Shipping Administration, Post Exchanges, and similar outlets established at Army or Navy Camps, nor on deliveries to American Red Cross, United Service Organization, and similar organizations. Deliveries for Lend-Lease and BEW also seem to be exempt from quotas.

Glass container shortage due primarily to lack of transportation

The glass container problem is less a question of materials and facilities to produce the containers than it is the shortage of manpower and transportation. There is little hope that transportation will be better. The prospect is that it will be increasingly tighter. Since May the movement of freight and traffic to the Far West has been unprecedented. And it is growing. As the military campaigns grow in intensity, the demands upon all forms of transportation will increase.

Alcohol may be more plentiful but not for cosmetic industry

You hear all kinds of yarns about alcohol here. It may be more plentiful. But it will not be more plentiful for the industry during this war. It is wise to use this equation as a constant in your calculations. Meanwhile some experimenters are trying to get alcohol out of sweet potatoes; others, out of pineapples. Brazil is reported to have an excess of rice which may be used to make alcohol, and India has an enormous wheat crop which the British hope to use to make alcohol. Canada planned to erect alcohol factories in Saskatchewan, but has cancelled the contracts. They get more for the wheat in other markets. Late in June, all glycols, used sometimes as substitutes for glycerine, in cosmetics, dentifrices, mouth washes, and flavors, were placed under complete tight allocation control by WPB. OPA formulated price maxima on Cuban alcohol in order to offset the duties and other costs. OPA also sanctioned an \$8,000,000 subsidy from Defense Supplies Corporation to hold down the rising prices on alcohol for industrial and civilian purposes. The subsidy grew out of the higher open market prices for corn when CCC stopped selling the grain to distillers on July 1. Government expects to pay about 60c. a gallon for alcohol it buys to depress the prices.

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Here and There Among Our Friends

► Carl Weeks, president of the Armand Co., Des Moines, Ia., in a recently published interview urged manufacturers to restrict sales to old customers and to oppose new and needless outlets.

► Charles Luckman, newly elected president of the Pepsodent Co., Chicago, Ill., is probably the youngest head of a large corporation in the country. He is 34 years of age, an alumnus of the University of Illinois and an employee of the Pepsodent Co. for 18 years which he joined as assistant purchasing agent.

► Henri Costerg of Les Parfums de Dana, Inc., New York, N. Y., has returned from an extensive trip around South and Central America in the course of which he visited the company's factories in Argentina, Uruguay, Chili, Peru, Colombia, Venezuela, Costa Rica and Mexico. He reports that conditions in those countries were good. His trip which was in the nature of a good-will tour was in line with the desire of the State Dept. to further good relationships between this country and our Latin American neighbors.

► Lieut. B. T. Bush, Jr., son of B. T. Bush, founder and head of Bush Aromatics, Inc., New York, N. Y., is receiving the congratulations of friends on the arrival of a daughter June 20. Lieut. Bush is a pilot in the air service of the U. S. Navy and is stationed at San Pedro, Calif.

► Miss Helen L. Booth who has been actively identified with the Drug, Chemical and Allied Trades Section of the New York Board of Trade during the years of its greatest growth is acting as secretary of the Section while Lieut. John C. Ostrom is away on leave, serving in the U. S. Navy.

► Alphonse Pillet, for many years with the aromatics division, E. I. duPont de Nemours & Co., New York, N. Y., office, has resigned.

► Arthur Irish of the Vancouver, B. C., office of Florasynth Laboratories has been appointed Tea, Coffee and Spice Administrator in Canada. He will have offices in Ottawa and Toronto. A leave of absence for the duration has been given him by the company.

► M. J. Creighton, who has been general manager of the cellulose products department of Atlas Powder Co. for the past eight years, has been appointed general manager of the company's

industrial chemicals department, including the polyalcohols division and the Darco Corp. He will also have charge of research and development including post war planning. His headquarters are now at the company's general offices, Wilmington, Del.

► Miss Zena Wilma Lakritz, daughter of William Lakritz one of the officers of Florasynth Laboratories, New York, N. Y., joined the office staff of the Chicago branch of the company following her graduation from Northwestern University, June 17.

► P. R. Casey who succeeded Edward P. Morrish as head of the cosmetics and toiletries unit, Chemicals and Drugs Branch, OPA, is well known to the trade as vice-president of Kurlash Co., Inc., where he was in charge of sales at the New York office.

► Louis Campert, vice-president of the Felton Chemical Co., Brooklyn, N. Y., spent ten days in Los Angeles in June, where he looked over the business situation.

► Adolph Spiehler, former president of the old Manufacturing Perfumer's Assn. and an active figure in the American Manufacturers of Toilet Articles, is directing the destinies of the Rochester Brewing Co., Rochester, N. Y., which he organized to manufacture the popular "Old Topper" beer.

► R. Righton Webb, treasurer and general manager of W. J. Bush & Co., Inc., New York, N. Y., has returned from a periodical visit to the company's California plant at National City where



R. R. Webb visits California. At top he is shown with Jack Barrett and Wilbur Bradley; below, he appears with Nick Smith, factory superintendent of the National City plant

he conferred with Wilbur Bradley, chief chemist, and Jack Barrett, manager. The National City plant continues to operate at capacity producing lemon, orange and grapefruit cold pressed oils and corresponding juices and juice concentrates. Most of its products are taken by the services.

► Floyd Winegard, president of Commercial Laboratories, Newark, N. J., devotes a large part of his time to civic work designed to aid the war effort. He is chairman of the Red Cross Blood Donor Service for Wayne County since it was started and is assistant chief observer for Air Spotters and is in charge of the local station. He is also head of a Boy Scout troop and directed the successful salvage drives which have been conducted in Newark. Although it consumes most of his spare time, Mr. Winegard enjoys the work very much. He's a veteran of World War I.

► Norman Dahl, former president of the Toilet Goods Manufacturers Assn. of Canada, recently delivered an address on the toilet goods industry before the Rotary Club of Toronto.

► Leonard A. Danco, son of Gerard Danco, president of the company which bears his name has been graduated from Harvard University, with a B.A. degree and on June 1 received a commission as ensign in the Coast Guard. He is 20 years of age.

► Lyman K. Stuart, president of C. H. Stuart & Co., Newark, N. Y., is chairman of the War Bond campaign for Wayne county and he is doing a splendid job.

► Ralph E. Dorland, Dow Chemical Co., New York, N. Y., has been appointed representative of the Drug, Chemical & Allied Trades Section of the New York Board of Trade on the parent board of directors, succeeding the late Francis McDonough. Mr. Dorland was chairman of the Section in 1940 and since then has served as a member of its Advisory Council.

► Dr. Alexander Katz, chief research chemist for the Florasynth Laboratories, Hollywood, Calif., in company with B. O. Pinder of the Kelly-Douglas Co. and Robert Dagger of Florasynth Laboratories (Canada) Ltd., Vancouver, enjoyed a fishing expedition at Paul Lake, Kamloops, B. C., the latter part of June. Dr. Katz reports that they caught 18 fish the first day.

► Robert Arcularius has been elected vice-president and a director of S. P. F. of America, Inc., New York, N. Y., which distributes Suzy perfumes.

Tombarel

As a dependable source of supply for quality perfume products and aromatic specialties, Tombarel has been privileged to serve the manufacturers of perfumes, cosmetics and soaps for a hundred years—and more.

Tombarel laboratories are now playing an important role in solving many pressing problems of adjustments and replacements for our customers.

Special Perfume Creations . . .

for all purposes

Basic Perfume Materials

Aromatic Chemicals

Essential Oils



Tombarel *Products Corporation*

L. J. Zollinger, President

12 East 22nd Street

New York, N. Y.

War Check List

Federal rules and regulations on price control, allocations and other regulatory measures issued or proposed during the past month digested.

Lanolin may be placed under allocation

Because of the stringency in supplies there is discussion in the WPB of allocating lanolin.

How alien property custodian will sell enemy properties

Business enterprises and other property seized by the Alien Property Custodian, Washington, D. C., will be offered for sale under the terms of General Order 26. Properties valued at less than \$10,000 will be sold either at public or private sale. Larger properties will be sold through public sales through sealed competitive bids. Some will be disposed of in government regulated securities markets. Each public sale will be advertised 15 days in advance.

Urea and melamine aldehyde resins under allocation

Urea and melamine aldehyde resins and molding compounds were put under allocation July 1. Certified descriptions of ultimate use are the bases for authorization by WPB. The receipt in any month of a total from all sources of not more than 1000 lbs. of urea or melamine aldehyde resin and not more than 100 lbs. of urea or melamine molding compounds is exempted from specific authorization by WPB.

Methods for determining prices of 19 plastic materials set

Methods for determining prices at which manufacturers may sell 19 main classes of resins and plastic materials were fixed by OPA June 17. The new controls are given in MPR 406.

Used fiber drums made available to industry by WPB

About 60,000 used fiber drums and about 7,000 28-gauge drums have been made available to industry by the Packaging Unit of the Chemical Division of WPB which has compiled a list of sources of supply in various sections of the country.

Glycol ethers now under allocation—exemptions

Glycol ethers went under allocation July 1, by order M-336.

Delivery to any person in any month of not more than 400 lbs. of mono-

butylether of ethylene glycol or not more than 460 lbs. of monoethyl ether of diethylene glycol is exempted from WPB authorization.

Micro-crystalline wax and blends under allocation

Effective July 1 micro-crystalline wax and blends were put under allocation by WPB Order M-195.

How to make appeals from War Manpower Commission actions

Appeals by employers and employees from any War Manpower Commission action should be made in accordance with Regulation 5.

Restrictions on new glass containers in L-103-b

WPB Order L-103-b effective July 1 places quota restrictions on the number of new glass containers which many types of users may accept, have manufactured, or have set aside for their account. The order is tied in closely with WPB's Conservation Order M-104 governing closures for glass containers. Glycerine, hand soap, shaving cream and cleaners are in the list of items that appear in Schedule III of M-104; chemicals, household and industrial supplies, and items in that schedule are limited by L-103-b to glass containers for the four months beginning July 1, 1943, to 80 per cent of the number of glass containers and metal cans accepted either in the corresponding four months of 1942 or in one-third of the full calendar year 1942. Soaps—otherwise defined—are in the list of items that appear in Schedule II of M-104; drug products for medicinal or health purposes only, and items in that schedule are not restricted in the number of glass containers they may accept.

For cosmetics and other toilet preparations the quota is 65 per cent of the number of new glass containers and metal cans in either of two base periods: (1) the four-month period beginning July 1, 1942, or (2) any four-month period of 1942. Small users may accept a maximum quantity of \$1,000 worth of new glass containers for the entire quota period. There are also delivery restrictions. Glass containers on hand or in transit July 1 are not affected by the order.

Simplification program for glass containers effective August 6

After August 6 glass manufacturers will be subject to the WPB simplification program which is expected to restrict wide mouth ware to about 50 styles including recommended war-time standard lines.

Summer edition of U. S.

Government Manual now available

The summer edition of U. S. Government Manual, a 707-page reference book on the organization, function and activities of the Federal departments and agencies is now available. Single copies cost \$1.00 and are obtained from the government printing office, Washington, D. C.

Smaller War Plants Corp. aims to spread work

The Smaller War Plants Corp., Washington, D. C., has issued a booklet "Spreading the Work", which fully discusses the corporation, its functions, powers and nation-wide organization and its close relationship with the procurement services and American industry. It also explains its ideas to spread work.

Unlabeled bulk drugs condemned after shipment

Bulk shipments of drugs not properly labeled under the Federal Food, Drug and Cosmetic Act are condemned after shipment by the manufacturer to another company for repackaging and labeling. An agreement that the drugs would be packaged and labeled to conform to the Federal law before sale to the consumer does not exempt the drugs from labeling requirements when the agreement fails to contain specifications as to the label on the retail package.

Two major high lauric acid oils released by government

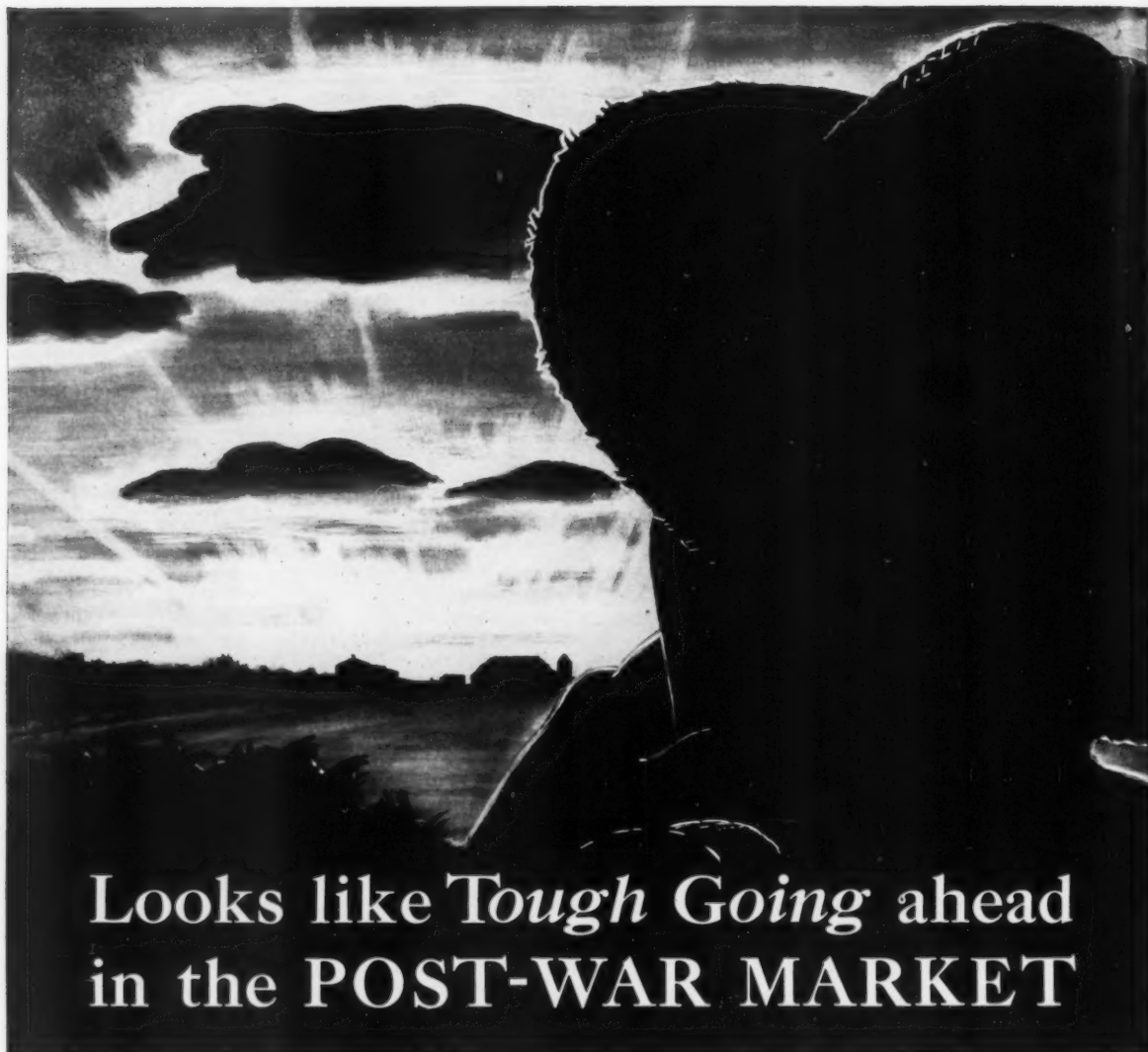
Supplementary Order M-60-a restricting use of coconut oil, babassu oil, palm kernel oil and other oils with a high lauric acid content has been revoked by the W.P.B. and the subject matter concerned re-issued by the Food Distribution Administration of the Department of Agriculture as Food Distribution Order No. 46.

Use of stabilized rosin in soap making prohibited

Use of stabilized rosin in the manufacture or preparation of soap has been prohibited by the W.P.B.

Federal withholding tax forms available

The Treasury Department has issued to the various collectors of internal revenue a form (W-4), which is to be used by the employees of firms and organizations in filing with their employer, information concerning marital status, etc., to be used in computing the withholding tax.



Looks like Tough Going ahead in the POST-WAR MARKET

IT'S WISE to think the return to easy-going, pre-war conditions will *not* be quick when peace comes.

The post-war market will be hard to sell—and hard to keep sold. Buying habits will have changed. Competition will be keener.

There'll be need for more aggressive selling, more vigorous merchandising—and *better packaging*.

It's not too early to be planning ahead now. Ritchie has!

During the more than two years we have been busy on war work, we have also been busy developing new machines, new methods, new ways to give you *better packages at lower cost*.

This war-won knowledge is yours to employ *now* through Ritchie packaging engineers and designers. Their services are offered without cost, without obligation and without thought of gaining immediate business.

Start planning for tomorrow's needs—today—with Ritchie.

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DETROIT

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ST. LOUIS

MINNEAPOLIS

DENVER

MIAMI

Palm oil and imported inedible tallow for soap makers

The release of palm oil and imported tallow to industry from government stocks may soon be available to soap makers to relieve the shortage of tallow. The Fats and Oils Branch, FDA, has been collecting information to carry out such a plan. Manufacturers who may wish to be in line for stocks of inedible tallow and palm oil when these become available should write to Thomas S. Prichard, 2102 Temporary S. Bldg., Washington, D. C.

Importers need not give affidavits to banks

Importers are now relieved of the necessity of furnishing banks with affidavits showing that importation for which financing is sought comes within the exceptions allowed by law.

Henceforth, it will be sufficient if the bank is satisfied from the known facts that a transaction is permissible, under the terms of General Imports Order M-63 as amended.

Regularly established prices defined by WPB

Regularly established prices, as the term is used in Priorities Regulation No. 1, cannot be regarded as higher than the ceiling prices established by the Office of Price Administration, according to a ruling June 3 of the War Production Board. This interpretation means that a manufacturer may not reject an order bearing a preference rating on the ground that the price offered is below the regularly established price, if the purchaser meets the OPA ceiling.

Cut off date for non-standard glass containers Jan. 5, 1944

The cut off date for the manufacture of non-standard glass containers for maple syrup, syrups including blended, bottlers, cane, corn, molasses, sorghum, malt and fountain syrups, fruit juices and a few other food products is January 5, 1944, under L-103.

Compulsory grade labeling of fruit juices, etc., withdrawn

Compulsory grade labeling of the 1943 pack of canned fruits, vegetables and juices as required by MPR-306 has been withdrawn by OPA and an alternate method of control substituted.

Black plate for closures for proprietary preparations

M-104 as amended includes a proviso which allows, under Schedule II, Drug Products Closures, Item 30, "Oint-

ments, cerates, petrolatum, pastes" unlimited quantities of blackplates to be used in making closures. Item 35 under the same schedule provides that a manufacturer may use 100 per cent of the number of closures as used in 1942 for "Proprietary preparations."

Only FDA can assign priorities to soap

Only the Food Distribution Administration and not the WPB can properly assign priorities ratings to soap, glycerine, fats, oils or fatty acids under Amendment No. 1 to Food Distribution regulation No. 1. No WPB priority or preference rating assigned to some other product may be extended to soap, glycerine, fats, oils or fatty acids.

Ethyl acetate and isopropyl acetate now under allocation

Ethyl acetate and isopropyl acetate have been placed under allocation. Small order exemptions of 54 gallons in any given month are provided.

Cellulose plastics under allocation since July 1

Cellulose plastics were placed under allocation July 1 by M-326A. Small order exemptions differ for the various cellulose plastics.

Proclaimed list of blocked nationals

Cumulative supplement 2 was issued June 4 containing additions and revisions of the proclaimed list of blocked nationals since the last edition was published in April.

Denatured alcohol in toilet preparations

The Bureau of Internal Revenue has completely revised Alcohol Regulation No. 3 covering the use of denatured alcohol in toilet preparations. Particular attention is given to reprocessing, bottling or repackaging of alcoholic products.

Use of saccharin in foods approved in Michigan

A new law in Michigan permits the use of saccharin, when so labeled, in the manufacture of foods, beverages and drinks.

Exemptions for small users of glycols increased

Under M-215 any person may accept delivery of the following quantities of each of any two kinds of glycols without specific authorization provided they are not the same kind previously allo-

cated: Ethylene glycol, maximum 5000 lbs.; propylene glycol, maximum 950 lbs.; diethylene glycol, maximum 1000 lbs.; triethylene glycol, maximum 250 lbs.; mixed glycols, maximum 250 lbs.

New season fish oil available up to 40 per cent average use

Fish oil from the new season's catch is now available to soapmakers up to 40 per cent of the average use in 1940 and 1941, under Food Distribution Order 60.

WFB confirms FDA's control over fats and oils

WPB Priorities Regulation 3 as amended includes the following as not subject to WPB preference ratings of any kind: sulfated, sulfonated and sulfurized fats and oils, tall oil, wool grease, soap (other than metallic), fatty acids and glycerine. The foregoing are now under the jurisdiction of the Food Distribution Administration.

Fats and oils well above 1941-1942 production

In June fats and oils products in this country were estimated at 11,000,000,000 pounds, 1,000,000,000 pounds above the 1941-42 production. War Food Administration will now permit Commodity Credit Corporation to sell coconut and babassu oils to any industrial user who applies, whether he sold oil to CCC or did not sell oils. Argentina has prohibited the export of all edible vegetable oils. Fats and oils now may be sold under priorities to Army, Navy, and other Government agencies. The ratings are issued under the food classification by War Food Administration.

Pepper and cinnamon quotas again reduced

Pepper and cinnamon quotas have again been reduced. Pepper which could be had at 60% of the base period is now cut to 40%. Cinnamon, which was available at 40% of the normal supply, now is cut to 35%. There has been no change in the restrictions on other spices. Citric acid was placed under complete allocation July 1. Armed Services and Lend-Lease need more. There is not yet any restriction on deliveries that total 125 pounds or less a month. Other deliveries must be authorized by WPB. There is citric acid in the 12 ounces of lemon powder placed in packages sent to American soldiers who are prisoners of war. The American Agricultural Attache of the Embassy at Rio de Janeiro reported that through the Banco de Brazil the Brazilian Government is arranging to allocate \$2,500,000 to produce orange oil.



YOUR MARKET?

*You're lucky
she isn't!*



YOUR MARKET!

*You're lucky
she is!*

The *new order* glorifies the "muscle girl." The *new order* offers little room for such "non-essentials" as "glamor girls" and beauty aids. You're lucky you don't have to do business in that kind of a market.

THE AMERICAN WAY glorifies the girl, who is so much more feminine than female that she would be lost without her powder and lipstick—her foundation

cream and rouge. You're lucky to be doing business with that kind of a market.

Yesterday (the pre-war period) this girl built your business into a billion-dollar industry. Tomorrow, she'll sweep your sales and profits upward to a peak now beyond estimation.

Nopco is proud of its part in helping America maintain its position

as world cosmetic center. Nopco is proud of its ability to provide high grade bases for perfumes and soaps — and other outstanding products for the cosmetic and toiletry trades.

And Nopco is confident that its research and manufacturing facilities will continue to play an important role in helping the "beauty trade" with its ingredient problems of the peacetime future.

COSMETIC BASES

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SHAMPOOS

•

ABSORPTION BASES

BUY BONDS



NATIONAL OIL PRODUCTS COMPANY

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NEWS and EVENTS

Beauty Industries Assn. supports simplification program

The Board of Governors of the National Beauty and Barber Industries Assn. has adopted a resolution to support the voluntary simplification program for paper containers used in packaging toilet goods and cosmetics. Over 100 manufacturers, including the largest in the retail and professional industry, have committed themselves to this program and it is felt that over 90 per cent will respond.

Steady rise in employment among older workers

More than one-third of the total number of persons employed in May were over 45 years of age or over, according to the War Manpower Commission. The steady rise in employment among older workers indicates that employers are losing prejudice against this group and learning to value their experience and steadiness.

Toilet goods simplification benefits Canadian retailers

Toilet goods simplifications have, in the majority of cases, benefited the retail trade, the War Time Prices and Trade Board of Canada states. "Substitute" ingredients have been found, which maintain or improve the standard of many products.

Would bring vanilla extract business back to drug stores

Parke, Davis & Co., Detroit, Mich., has begun a campaign to bring vanilla extract business back to drug stores. Booklets featuring receipts and other dealer helps are being distributed to druggists.

Alfred D. McKelvy Co. establishes branch office in Havana

The Alfred D. McKelvy Co. makers of Seaforth for Men toiletries has established a branch office in Havana. Commenting on the situation brought about by the war Alfred D. McKelvy, president, says: "Latin America for the first time can buy products from the United

States above the class of bare necessities. Seaforth is making its plans accordingly, especially for post war expansion in the Americas."

California Cosmetic Assn. closes Hollywood headquarters

The California Cosmetic Assn. closed its headquarters in Hollywood the past month and the business of the organization at present is being handled from the office of President Jack Nethercutt of Santa Monica. Miss Lois Armstrong, the executive-secretary, who had been in indifferent health this year, has resigned. The association was established more than a decade ago.

Cosmetic-control bill introduced in Alabama

A food, drug and cosmetic-control bill, H-367, has been introduced in Alabama. The bill authorizes the state authorities to make such rules and regulations as they deem desirable, "aimed toward the successful accomplishment of the broad purposes of the bill".

Collective bargaining by retail druggists favored by Assn.

The Idaho State Pharmaceutical Association is holding six district conferences this year in place of its annual convention. So far five have been held: Idaho Falls, Pocatello, Twin Falls, Lewiston and Coeur d'Alene. The last one is to be held at Boise on a date not yet set. Among resolutions passed at the five conferences is one supporting the Representative Wright Patman bill which would allow retailers to bargain collectively without running afoul of the anti-trust laws. All conferences so far have been well attended. The need for shorter store hours in many towns of the state was expressed by those at the conferences.

Max Factor seeks injunction against Parfait Powder Puff Co.

Max Factor & Co., Hollywood, Calif., is seeking an injunction in the U. S. District Court against the Parfait Powder Puff Co. to restrain it from using the trade mark "Pan Cake."

Santa Monica Flavor & Extract Co. changes name to Kings-X, Inc.

The Santa Monica Flavor & Extract Co., Santa Monica Boulevard, Los Angeles, has changed its name, changed its address and acquired a plant five times the size of and greatly superior in other respects to the old one. The firm is now located at 7565 Melrose Avenue, Los Angeles, 46. The company name hereafter will be known as Kings-X, Inc., which has been, and will continue to be, its trade name. F. A. Fetsch, an active member of the Flavoring Extract Manufacturers' Assn. of California, is owner and manager. The decision to change the name was made because of the fact that it was often thought by the public that the firm was located in the town of Santa Monica, nearby.

Alligator glands as fixative for Latin American Mfrs.

Some business is being done in Argentina and Paraguay with alligator glands which are used for making fixatives. Anyone interested in securing this material should communicate with Dr. Hermann Frank, Montevideo, Uruguay, South America.

Pacific coast representatives for Magnus, Mabee & Reynard

A trio of representatives on the west coast for Magnus, Mabee & Reynard, Inc., New York, N. Y., has been announced by Percy C. Magnus, president. They are: Braun Corp., Los Angeles, southern California and Arizona; Braun, Knecht, Heimann Co., San Francisco, northern California and Nevada and Van Waters & Rogers, Seattle, Portland and Spokane for Oregon, Washington, western Montana and Utah. These organizations will cover all industries except the wholesale drug trade.

The glass brick building recently acquired by the company at 123 Watts St., New York, will be used chiefly for storage, bottling and miscellaneous equipment. An increase in the concern's office and merchandising facilities in Chicago was also made recently.

Duval

OIL BERGAMOT ARTIFICIAL EXTRA

Synthesis of the Natural Oil of Bergamot to a very high degree of perfection not easily matched. Has the same chemical specifications as required by the National Formulary for Oil of Bergamot.

Samples and prices gladly furnished on request.

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Kallman contends that FTC charges are not valid

L. R. Kallman, trading as L. R. Kallman & Co., Chicago, Ill., in answer to a complaint of the Federal Trade Commission maintains that representations that Chin-Ep eliminates and prevents flabbiness of the throat line and makes loose skin on the throat smoother and firmer are not false, misleading and deceptive. Similar claims are made by another product also made by this company, and known as Digitite.

Soap and fatty acids included in definition of food

Soap and fatty acids as well as glycerine and fats and oils are now included in the Division of Food in F. D. Reg. 1, the basic priorities regulation of the Food Distribution Administration. Every purchase order for soap issued by the services now bears an automatic F. R.-10 rating which may be extended to fats, oils and fatty acids only when authorized in writing by the contracting officer. The same holds true of all other "foods".

DCAT provides arbitration of commercial disputes

The Drug Chemical and Allied Trades Section of the New York Board of Trade has called attention to the fact that it has facilities for the arbitration of commercial disputes.

Portrait of Percy Magnus to be presented to Board of Trade

A well-deserved tribute to Percy C. Magnus for the many years he has served as president for the New York Board of Trade and for his impartial devotion at all times to its ideals for which the Board stands will be paid to him as a result of a suggestion of a number of members. An outstanding American portrait painter has been commissioned to paint the portrait of Mr. Magnus which will be presented to the Board with appropriate ceremonies when it is completed as a permanent and inspirational addition to its headquarters.

Packaging Machinery Mfrs. Institute discusses post-war problems

Post-war problems were discussed at the meeting of the Packaging Machinery Mfrs. Institute in New York City, June 16. The younger company executives were especially invited. E. A. Siebert, F. B. Redington Co., Chicago, Ill., presided. He was assisted by H. L. Greene, J. L. Ferguson Co., Joliet, Ill.; Wickliffe Jones, R. A. Jones & Co., Cincinnati, Ohio; Bryant W. Langston, Samuel M. Langston Co., Camden, N.

J.; Harold Mosedale, Package Machinery Co., Springfield, Mass. Wallace D. Kimball, president of the Institute, made the opening address.

Danger of inflation considered by Utah Pharmaceutical Assn.

Warnings from different speakers of the grave danger of inflation in this country were heard at the 51st annual convention of the Utah Pharmaceutical Association, held in June at the Hotel Utah, Salt Lake City. An OPA official said in part, "the word inflation has been so abused, misused, misunderstood and kicked around, that its common use fails to arouse the ordinary citizen to a sense of danger which is threatening our economic structure."

Charles Empey of Ogden, Utah, a wholesale druggist, dealt with the problems of wholesalers and retailers. An army officer spoke on the subject of the draft and suggested that a committee be formed to work with Selective Service boards in the consideration of deferments for pharmacists.

W. D. Wood, Ogden, president of the association, presided. George A. Evans, Bingham, was elected president. Earle F. Gardemann, Salt Lake City, was re-appointed secretary.

Parfums Weil Paris Co. name of copartnership succeeding corporation

Parfums Weil Paris, Inc., New York, N. Y., which filed voluntary papers of dissolution as a corporation with the Secretary of State has not discontinued business. The step was taken to convert the company into a copartnership consisting of Alfred and Jacques Weil under the name of Parfums Weil Paris Co., New York, N. Y.

First toiletries show in Los Angeles held this month

Sponsored by the Chamber of Commerce of Los Angeles, a toiletries show was held at the Biltmore Hotel, July 12-16.

Chicago Drug and Chemical Assn. holds golf tournament

The following net winners in the Chicago Drug and Chemical Assn. golf tournament at the Itasca Country Club were Russell Brown, Roure DuPont, Inc., 69; Al Nelson, Firmenich & Co., 70; Robert Candke, Sonneborn, 69; and Joseph Gauer, Fritzsche Brothers, 72. M. N. Hyatt had the fewest number of knocks for first prize in the guest group. It was a hot day which terminated with a steak dinner followed by bridge and gin rummy. Another tournament will be held at the Evanston Country Club, July 14.

Maryland increases permit fee for drug manufacturers

The health law of Maryland has been amended so that the permit fee for drug manufacturers is increased from \$1 to \$5.

Urb Medicated Soap Co. to engage in business in Calif.

Urb Medicated Soap Co. is the firm name under which Maurice M. Grudd, of North Hollywood, Calif., has published an intention to conduct business at 7245 Clybourne Avenue, Roscoe, Calif.

Dr. Alexander Katz finishes long trip with lectures

An extensive trip in Mexico and the South West United States has been completed by Dr. Alexander Katz, chief chemist of Florasynth Laboratories, Hollywood, Calif. Included in the itinerary were New Orleans, Dallas and an air trip to Mexico City and to the Florasynth plantation in Papantla, Mexico. In New Orleans with Edward Haase, manager of the company's local branch, Dr. Katz called on the trade and in Dallas he was a guest of honor at a dinner party given by the organization. Soon after his return he lectured at the Occidental College in Los Angeles on war materials and synthetics. He also recently gave a three-hour instruction lecture to the food technology class of the University of Southern California. The subject was the importance of flavors in connection with the nutritional values of foods and covered pure and imitation flavors.

Cosmetic Credit Men's annual outing at Great Neck June 18

Informal gaiety marked the annual outing of the Drug Cosmetic and Chemical Credit Men's Assn. at the Plandome (L. I.) Country Club June 18. First prize was won by Andrew Fredericks, and the low score on a most difficult course was tied between Ed Maloney, Ed Foster and Ed Cavanaugh, according to the tally cards turned in by these gentlemen of unimpeachable integrity. George Patterson played 29 holes and Ed Farrell was a close second. Following the golf match a dinner was held at the Plandome Country Club at which many executives from companies in the group attended; and, as usual, everyone had a most enjoyable time. Following this, the party went to the home of Nat Otte at Great Neck where numerous forms of amusement were provided. Despite the transportation difficulties the attendance was unusually good and again emphasized the spirit of co-operation which exists in this group.

PERFUMERS

BASIC MATERIALS



Caleptone D

Caleptone D is decidedly a fixative with a low vapor pressure, neutral odor character and high co-solvent action. Can be used in any compound where a fixative is needed. Contains a faint musty odor.

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Beehive Brand Beeswax is 100% pure, it is uniform in texture and perfectly white. Our buyers select it from the finest grade of crude beeswax. It is then tested for purity, quality and uniformity in our own laboratories, and bleached by the sun and air.

Uniformity of Beehive Brand Beeswax will keep your product always up to the high standard you set for it. The quality and uniformity never change. It is entirely free from adulterants and imperfections of any kind. And back of every tablet of Beehive Brand Beeswax stands the reputation of the manufacturer.

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SPERMACELE	PERFUME	YELLOW BEESWAX
RED OIL	COMPOSITION WAXES	HYDROLYSIN
		STEARIC ACID

American Home Products Co. buys Bartos Co.

The American Home Products Co., Jersey City, N. J., has purchased E. E. Bartos, Inc., Locust Valley, N. Y. The Bartos company manufactures compact kits for physicians.

Babs Creations Inc. moves to Fifth avenue, New York

Babs Creations, Inc., distributors of Yesteryear Toiletries and Wood Nymph pine products, has moved its executive offices to 550 Fifth Ave., New York, N. Y.

W. C. Ritchie & Co. wins coveted Army ordnance banner

For meritorious production of war goods the management and employees of W. C. Ritchie & Co., Chicago, Ill., have been awarded the coveted Army ordnance banner. The company has made a wide assortment of weather and oil-proof containers for foods, devices and munitions and other devices used in the war.

Cosmia Laboratories moves to new quarters in New York

Cosmia Laboratories is now located in its new offices at 95 Madison Ave., New York, N. Y. The telephone number is Murray Hill 3-3233. Frank D. Tamas reports that this concern which holds the exclusive agencies of Cosmia Laboratories d'Etudes Scientifiques, Paris, France, specializes only in manufacturing cosmetics for an exclusive clientele.

Peppermint acreage below that of 1942

The total acreage of peppermint and spearmint to be grown for oil this year is about six per cent under 1942, according to the Dept. of Agriculture. Acreage was increased in Washington and Oregon but decreased in Michigan and Indiana.

Supreme Court of U. S. to review Colgate coconut oil tax

The U. S. Supreme Court will review the finding of the Circuit Court of Appeals as to the meaning of the term "first domestic processing" in the 1934 tax law as applied to taxes on imported coconut oil. The petition was filed by the Colgate-Palmolive-Peet Co.

Lentheric enters cosmetic stocking field

Lentheric, Inc., New York, N. Y., is offering a new leg make up "Soft Focus" in an oval container with a

white cap and label. The package is neat in appearance, holds four ounces and retails for one dollar.

Lageat of Chiris in London on French Mission

Jean Lageat, managing director of Antoine Chiris Co., New York, has answered a call from Free French Administration at present in London, to undertake certain advisory and administrative duties in the French service. He left by plane June 7th for London. "His return to New York is necessarily indefinite," says Louis Rapin, president of Chiris, New York, "but it is hoped the emergency service upon which he is engaged may not be of too lengthy a period."

Mr. Lageat came to New York in October of 1939. As former general manager of Antoine Chiris Co., Grasse, France, his contacts and duties in handling the firm's important interests in several French colonies provide an experienced viewpoint which should be of value in his prospective services to the current emerging French administration. While in this country Mr. Lageat has been active in the trade and made many friends throughout the industry, who hope for his speedy return.

Three firms in industry among ten largest advertisers

The largest single advertiser in the United States in 1942 was the Procter & Gamble Co. The second largest was Lever Bros. Co. and the seventh largest was the Colgate-Palmolive-Peet Co.

New all-purpose toilet soap purchased by Quartermaster Depot

The new all-purpose toilet soap, being purchased by the Jersey City Quartermaster Depot, will even permit of salt-water showers on troop transports. The new soap is intended for use by American soldiers on transports and overseas, where bathing may take place one day in rain water in a tub and the next day in the open ocean. It was developed primarily for personal use, but can do double duty for laundry and other purposes.

Developed by Quartermaster Corps chemists in cooperation with industrial technicians and soap chemists, this new product is a mild, non-irritating soap. It has no abrasives or gritty substances to assist in the cleaning action and is

effective in removing almost any type of soil encountered.

Besides this new soap, which lathers when ordinary soaps won't, the Jersey City Quartermaster Depot, commanded by Col. George F. Spann, Q.M.C., also buys ordinary toilet soaps, sanitary soaps and grit soaps for removing heavy dirt.

Last year the Jersey City Quartermaster Depot bought 22,000,000 cakes of soap, worth \$600,000, for all overseas use. There were approximately 700,000 cakes of grit soap, 1,750,000 each of three other varieties, and more than 16,000,000 cakes of soap for toilet goods kits issued in combat zones.

Dow Chemical Co. ahead of schedule in new styrene plant

The Dow Chemical Co. achieved full scale production six weeks ahead of schedule in the first unit of its new styrene plant in Los Angeles, Calif.

New York Board of Trade celebrates 70 years of service

To commemorate 70 years of service since it was established at Cooper Union in June 1873 the New York Board of Trade held a special dinner June 30 at the Hotel Astor, New York, N. Y. Donald J. Hardenbrook spoke on "Our Last Chance." He referred to the salvation of American private enterprise.

Cannot claim that preparation will make nails grow longer

Flamingo Sales Co., Hollywood, Calif., has agreed with the Federal Trade Commission to cease representing that the use of its nail lacquer will cause nails to grow longer or prevent splitting or breaking of the nails.

Chicago salesmen holding second annual toilet goods show

The second annual toilet goods show of the Chicago Associated Toiletries Salesmen opened at the Palmer House, Chicago, July 12, and will continue through July 17. Officers of the association are W. R. Tenney, president; H. F. Carson, vice-president and chairman of the show committee; and H. R. Adamson, secretary-treasurer. There are over 75 exhibitors.

Employees of Merck & Co. get added group insurance protection

Employees of Merck & Co., Inc., Rahway, N. J., will receive additional protection under an amendment to the company's group insurance plan approved by stockholders April 20. It provides for both contributory and non-contributory insurance.



Jean Lageat

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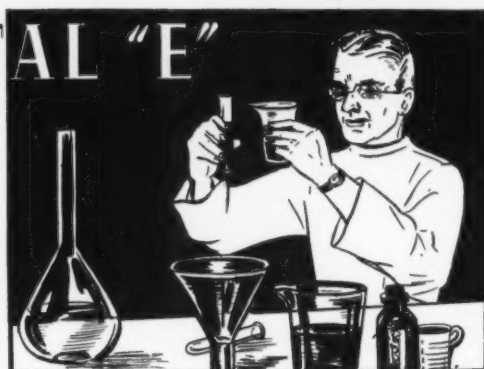
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Food tablets discussed by flavor makers of California

The monthly dinner-meeting of the Flavoring Extract Manufacturers' Assn. of California was held at the Los Angeles Athletic Club, Los Angeles, June 17. Charles S. Marston, Jr., Neil Flavor Laboratory, president of the organization, presiding. The principal speaker was Dr. Roger W. Truesdail of Truesdail Laboratories, Inc., Los Angeles, who spoke on "Recent Changes In Food Technology". Dr. Truesdail discussed the rise of dehydration as an industry, food tablets, and other things. He thought that food tablets may grow into a big industry after the war. He referred to the loss of flavor in dehydrated foods and observed that flavor has a very definite value in foods. A round table discussion was held at the close of the address during which questions were asked on various subjects, including flavors, nutrition, refrigeration, packing, etc.

F. L. Hart of the Federal Bureau of Food & Drugs spoke briefly and said he was ready at all times to cooperate with the association in any way possible.

Charles Myers, W. J. Bush Co., Los Angeles, chairman of the Membership Committee, reported two new members: Ludford Fruit Products, Inc., which will be represented at the meetings by its owner, Ted Ludford, and the Huggins-Young Coffee Co., to be represented by Louis Herrin, production manager. Both are of Los Angeles.

Lane Guthrie, Lancaster, Inc., Los Angeles, vice-president and chairman of the Legislative Committee, reported on a number of matters relating to corn sugar situation and the alcohol situation. The organization decided to send a wire to Washington concerning the corn sugar scarcity and one concerning the complications regarding the alcohol tax situation.

More make-up for legs than for faces sold in Eire last winter

In Eire where Henry C. Miner, Ltd., of London, England, has a separate factory and where sales are unrestricted, sales of liquid stockings have been steady. In fact, the company reports that more make-up for the legs was sold than for faces last winter. It should be remembered, however, that the climate is never very severe and bare legs are to be seen throughout the year. The company reports that the demand for liquid stockings for export has been increasing but recently export was put on quota so that sales are restricted. The company was the first to introduce liquid stockings which met with a phenomenal success. When war

came sales of liquid stockings were withdrawn in England as the company did not feel it wise to release supplies of leg preparations out of its cosmetic quota which it felt was hardly enough to meet facial requirements.

So far the Board of Trade of London has refused to issue any special licenses for supplies of liquid stockings to be released. Its attitude is that the manufacturer has the option of selling this line out of his quota and it is not the Board's fault if no manufacturer does so. The Board seems to be unmoved by its admittedly only other alternative which is to let women go bare-legged. In England where it is difficult to acquire a tan the result has been that women have resorted to the cosmetic black market to get make up for the legs.

Procter & Gamble booklet sets forth company's war work

Vital for Victory is the title of a booklet issued by the Procter & Gamble Co., Cincinnati, Ohio, to illustrate dramatically how American industrial ingenuity is helping wartime production. It describes the work of the company and of its research laboratories and sets forth the contribution of the company in the form of thousands of tons of glycerine. The industrial uses of soap in processing leather fabrics and metal are also described.

Perfume bottles and cosmetic jars at Los Angeles art show

Perfume bottles and cosmetic jars were well displayed at a Gift & Art Show held at the Biltmore Hotel, Los Angeles, in June, which occupied five days and attracted buyers from practically all the states, as well as from Honolulu, Mexico, Panama and elsewhere. In all, 2000 lines involving 20,000 items were displayed. Buyers reporting totaled 3500, it was stated, and about \$4,000,000 worth of business was transacted.

New trade mark bill may be enacted in autumn

The Lanham trade mark bill which completely revises the acts of 1905 and 1920 has been sent to the Senate following its passage by the House. Action on it is expected after the summer recess. The new bill provides that after an owner has had his trade mark in use for five years the right to continue its use shall be incontestable. The bill also simplifies the procedure in the protection of trade marks and in general eliminates objections developed by experience in the present law.

Schultes arranges drop in temperature for BIMS golfers

Over 75 members and guests of the BIMS enjoyed a golf tournament June 23 at the Wykagyl Country Club, New Rochelle, N. Y., where Martin Schultes had arranged for a ten degree drop in temperature. War bonds in the amount of \$250 were awarded to the winners. The final tournament of the season will be held at the Garden City Country Club, August 24.

Prize winners were: W. K. Sheffield, William H. Blanc, Rudolph Berls, C. R. Keeley, Harris Whitaker, Peter L. Forsman, Leonard H. Schultes, David J. Stewart, Jr., Roger Kenna, Paul E. Forsman, Earl Moore, James A. Leyden, Emory Wright, Paul Miller, Pierre Harang, Ross A. White, Burton T. Bush, Edward A. Bush, Sewell H. Corkran, Frank A. Nicholson, Milton Small, W. Krome, O. Dexter Neal, Joseph G. Kelnberger, Harry Badanes, Clarence E. Clark.

Brief items of late Washington developments

Dr. Bernard E. Proctor, of MIT, succeeds Dr. Frederick C. Blanck, of H. J. Heinz Co., as Director of Subsistence Research in the Quartermaster Headquarters. . . . Duty on essential oils imported from Paraguay has been reduced to 6¼% ad valorem. Lemon-grass and petitgrain oils will be admitted free. . . . War Labor Board announced beauty shops and barber shops employing eight or less persons may raise wages or salaries without the Board's approval. . . . Anything you sell in the future to Army, Navy, Marine Corps, Coast Guard, or War Shipping Administration, post exchanges or ships' service establishments will have the preference rating of any defense order, and will benefit by any exemptions that apply to defense orders. WPB announced the dispensation in an amendment to PR 17. . . . U. S. District Court ruled recently that a package which contained a commodity of less weight than authorized by OPA, violated price regulations unless there was a corresponding reduction in price. Mars, Inc., selling candy bars, had distributed candies sold for \$411,897.51. OPA is now proceeding to recover treble the sum, \$1,235,692.53, and costs, and is expected to win. . . . Chemical Division allocations for June: bismuth for cosmetics, 50% of the 1942 use; no glycerine for cosmetics, dentifrices, lotions, beverages, flavors; glycols, cosmetics 50% below previous allocations; dentifrices and mouth washes, 50% cut; flavors, 50% cut; methyl ethyl ketone, wholly denied for flavors; potassium chlorate for cosmetics restricted to 75%.

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Planning to allocate cellulose acetate to cosmetic industry

While no cellulose plastics have been allocated for lipsticks, compacts, containers and closures for toiletries and cosmetics under M-326a effective July 1, the Drug and Cosmetic Section of the Chemicals Division is working closely with the Plastics Section of WPB to develop a program based on minimum requirements of the cosmetic industry. This is being done so that such available plastics may be distributed equally among all users.

More blackplate and terne may be available for closures

OCR (Office of Civilian Requirements) is responsible for some of the effort that apparently will bring about some relaxation of the restrictions on the supply of steel. There is nothing definite in the picture, but there is more than hope in the statement that there may be more blackplate and terne available to make a moderate quantity of closures. The Containers Division of WPB has just about finished an over-all survey of the needs of all those who use these materials for closures. The report should be ready shortly. Cork, incidentally, is practically free of any re-

strictions. The supply is abundant as the result of easier contacts with Spain, Portugal and North Africa.

Trade with Africa may be resumed in near future

Private trading with North and West Africa probably will be resumed on a limited basis soon according to Hector Lazo, assistant director of the Board of Economic Warfare.

Urea formaldehyde plastics being allocated to cosmetic industry

Due to misunderstanding many manufacturers of cosmetics have been under the belief that phenolic, urea and melamine molding compounds are under allocation for essential industries only. Whiting N. Shepard, assistant sales manager of the Plaskon Division, Libbey-Owens-Ford Glass Co., points out that urea compounds are currently being allocated for cosmetic uses at a proportion of 15 to 20 per cent of actual orders placed. As far as lipstick containers made from Plaskon urea formaldehyde compound are concerned, some material is being allocated under Order M-331 but it is not known how long this will continue. This will depend entirely on the total demands of

what the WPB might consider the more essential industries.

Obituaries

Norman G. Atkinson

Norman G. Atkinson, vice-president of the House for Men, toiletries for men firm and their representative in the Far West area, died late in June at the age of 59. Deceased had been in the toiletries and allied business all his life. He came to the Pacific Coast 20 years ago and made his headquarters in Los Angeles. He had been associated with different manufacturers during his career. Mr. Atkinson was born in Ohio. He submitted to an operation four months ago and had been ill since then. The widow, Mrs. Mary Atkinson, will succeed him in the business. She has traveled with him a great deal and is acquainted with all his customers, she said.

Constantine M. De Metre

Constantine M. De Metre, Los Angeles perfume manufacturer for the past seven years who had previously been in San Francisco, died June 20 at the age of 44. Deceased was born in Greece. The widow, Mrs. Edna De Metre, expects to continue the business.

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Supply of Raw Materials Tightens

TRADE in essential oils and aromatic chemicals followed a fairly even course over the past month. Oil dealers pointed out that they could have booked a greater amount of orders if it was not for the fact that stocks of certain major items were not readily available.

LEMON AND PEPPERMINT OUT

Two very important oils were virtually out of the market; namely, lemon and peppermint, and toward the middle of last month anise was added to the list of scarce articles.

Eucalyptus strengthened somewhat on advices received in some directions to the effect that no more replacements were possible. These reports appeared to be discounted by certain dealers, however, and it is hoped that a clearer picture of the situation may be had in the near future.

News reports from Washington served to create considerable attention. Of particular interest was the report indicating that alcohol would probably be placed under complete allocation. On the more favorable side was the rising feeling that some easing in price regulations, especially those which have worked a tremendous hardship upon suppliers might be noted. There have been hints from the industrial side suggesting that OPA might do a much better job by restricting its activities to a minimum number of consumer goods in the essential group rather than attempt to cover a wide range of commodities which in some cases, it is felt, have definitely hampered the war effort.

NO MINT OIL OFFERED

There was a complete absence of mint oil offerings from the country. Dealers explained, however, that this

failed to have any effect upon the general situation since under the present OPA setup it would be impossible for them to sell mint oils. An early season survey by the Department of Agriculture forecast an eight per cent drop in the harvest acreage. The outlook this year is for 37,940 acres, against 41,195 acres in 1942. Should the yield per acre hold up well, total output of oil should not vary much from last year.

Little bois de rose oil was available in the open market. Replacements have not been possible due to the inability to secure import licenses. Toward the close of last month about 40 tons were reported to have been sold subject to getting licenses and the first opportunity of securing steamer space.

BRAZILIAN MENTHOL ARRIVES

A few tons of Brazilian menthol have arrived here. Total arrivals, it is said, will not be sufficient to relieve the exceedingly tight position of the market here, and until local houses are able to establish the essentiality of this article, little in the way of any relief can be expected from Washington.

LANOLIN VERY SCARCE

Inquiries for lanolin failed to uncover any surplus material. In fact it is virtually impossible to secure anything for civilian requirements. Most makers are sold well ahead, and a good portion of this business is reported for the account of government agencies.

GUM SITUATION BRIGHTER

The gum market proved quite interesting. All grades of karaya remained scarce, and as the month closed importers indicated that they were anxiously awaiting additional arrivals. The fresh lots will be more than wel-

come to take care of back orders. For a time, gum Arabic was available at 16 cents per pound, but an improved demand quickly forced the market higher. Under present import regulations, consumers can only hope to secure about a quarter of the amount they received last year, but some trade factors believe that the opening of the Mediterranean, and the release of additional boats may tend to ease import restrictions. Spot supply of Sumatra benzoin is limited. What remains will have to be stretched until such time as United Nations gain control of the primary center.

VANILLA BEAN SITUATION

While more favorable prices were quoted on whole Mexican vanilla beans, the Tahiti varieties registered advances under the influence of a renewed demand. No fresh shipments of Tahiti beans are expected for the next few months. Spot supply of Bourbon beans is about exhausted and there does not appear to be any possibility of getting a steamer to import the beans that have been purchased at Madagascar. About 80 to 100 tons of beans are on the Island awaiting shipment. Import permits against these purchases were due to expire June 30, and there remains a general feeling of uncertainty as to whether they will be renewed.

VANILLA BEAN CONSUMPTION LESS

Because of difficulties in securing sugar and alcohol consumption of vanilla beans is not as large as it was a year ago. Arrivals of new crop Mexican cut beans have been meeting with a reasonably good demand, however, and new crop whole beans are expected to reach this market within the next few weeks. Houses explain however they have had some shipments of Mexican cut beans in transit for five or six weeks, whereas other shipments have been possible within a week.

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CONTENTS: The Essential Oil in the plant; the relationship between
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Apricot Kernel	.45@	.50
Amber, rectified	1.35	Nom'l
Angelica Root	125.00@	150.00
Anise, U. S. P.	3.85	Nom'l
Imitation	2.00@	2.10
Aspic (spike) Span.	4.00@	4.80
Avocado	.90@	.95
Bay	1.75@	2.50
Bergamot	20.00@	25.00
Brazilian	10.00@	
Artificial	4.00@	9.25
Birch, sweet	2.40@	4.25
Birchtar, crude	2.25	Nom'l
Birchtar, rectified	4.25	Nom'l
Bois de Rose	5.00	Nom'l
Cade, U. S. P.	1.35@	1.50
Cajuput	2.00@	2.75
Calamus	22.50@	35.00
Camphor, "white," dom.	.30@	.35
Cananga, Java, native	10.50@	11.25
Rectified	11.50@	12.25
Caraway	15.50@	17.50
Cardamon	30.00@	35.00
Cassia, rectified, U. S. P.	12.00	Nom'l
Cedar leaf	1.00@	1.10
U. S. P.	1.50@	1.60
Cedar wood	.65@	.80
Celery	25.00@	28.00
Chamomile	150.00	Nom'l
Cinnamon	10.50@	32.00
Citronella, Ceylon	1.15@	1.35
Java	2.75@	3.25
Cloves, Zanzibar	1.75@	2.00
Copaiba	.80@	.85
Coriander	27.00@	30.00
Imitation	8.00@	14.00
Croton	3.00@	3.75
Cubebs	4.75@	5.25
Cumin	8.50@	10.00
Dillseed	8.00@	8.50
Erigeron	2.15@	2.50
Eucalyptus	1.02@	1.07
Fennel, Sweet	3.25@	4.00
Geranium, Rose, Algerian	15.50@	16.00
Bourbon	14.00@	16.00
Turkish	4.95@	5.50
Ginger	22.00@	23.00
Guaiac (Wood)	5.00@	6.10
Hemlock	1.25@	1.35
Substitute	.55@	.60
Juniper Berries	15.00@	18.00
Juniper Wood, imitation	.75@	.80
Laurel	5.00	Nom'l
Lavandin	7.75@	8.25
Lavender, French	10.00@	12.00
Lemon, Calif.	3.25@	
Lemongrass	1.15@	1.50
Limes, distilled	6.25@	7.75
Expressed	11.15@	12.00
Linaloe	3.75@	4.10
Lovage	.95	Nom'l
Marjoram	5.50@	7.00
Neroli, Bigarde, P.	340.00	Nom'l
Petale, extra	325.00	Nom'l
Olibanum	5.00@	5.75
Opopanax	33.00	Nom'l
Orange, bitter	5.00@	6.00
Brazilian	1.25@	1.50
Calif. exp.	1.45@	2.25
Orris Root, abs. (oz.)	135.00@	
Artificial	36.00@	40.00
Pennyroyal, Amer.	2.65@	2.80
European	2.50@	3.00
Peppermint, natural	5.50@	5.65
Redistilled	5.85@	6.00
Petitgrain	1.75@	2.25
Haitian	2.25@	

Pimento	4.00@	7.75
Pinus Sylvestris	4.25@	5.00
Pumillonis	4.25@	4.80
Rose, Bulgaria (oz.)	25.00@	32.00
Synthetic, lb.	45.00@	55.00
Rosemary, Spanish	1.75@	3.00
Sage	8.25@	9.00
Sage, Clary	45.00	Nom'l
Sandalwood, East India	5.60@	6.25
Sassafras, natural	2.00@	2.15
Artificial	1.75@	2.25
Snake root	10.00@	12.75
Spearmint	3.35@	3.50
Thyme, red	2.60@	3.25
White	3.25@	5.00
Valerian	30.00	Nom'l
Vetiver, Java	32.00@	35.00
Wintergreen	5.25@	8.50
Wormseed	2.75@	3.10
Ylang Ylang, Manila	38.00	Nom'l
Bourbon type	18.00@	20.00

TERPENELESS OILS

Bay	2.75@	3.00
Bergamot	49.00	Nom'l
Grapefruit	65.00@	
Lavender	28.00	Nom'l
Lemon	40.00@	55.00
Lime, ex.	100.00@	150.00
Distilled	50.00@	67.00
Orange, sweet	100.00@	155.00
Peppermint	10.00@	14.00
Petitgrain	3.50@	4.00
Spearmint	5.00@	6.00

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	1.90@	2.75
Acetophenone	1.90@	2.00
Alcohol C 8	7.50@	10.00
C 9	14.00@	18.00
C 10	7.75@	12.00
C 11	11.50@	15.00
C 12	7.20@	8.50
Aldehyde C 8	22.50@	28.00
C 9	30.00@	32.00
C 10	24.00@	25.50
C 11	22.00@	26.00
C 12	30.00@	35.00
C 14 (so called)	6.00@	7.25
C 16 (so called)	8.25@	9.00
Amyl Acetate	.50@	.75
Amyl Butyrate	.90@	1.10
Amyl Cinnamate	4.50@	5.80
Amyl Cinnamate Aldehyde	2.75@	5.00
Amyl Formate	1.00@	1.75
Amyl Phenyl Acetate	3.75@	4.00
Amyl Salicylate	.80@	.93
Amyl Valerate	2.00@	2.75
Anethol	2.75@	3.10
Anisic Aldehyde	3.75@	4.00
Benzophenone	1.15@	1.30
Benzyl Acetate	.70@	1.00
Benzyl Alcohol	.75@	1.00
Benzyl Benzoate	1.10@	1.65
Benzyl Butyrate	3.25	Nom'l
Benzyl Cinnamate	6.00@	
Benzyl Formate	3.75	Nom'l
Benzyl-Iso-eugenol	10.25@	11.25
Benzylidenacetone	2.25@	3.40
Borneol	1.80	Nom'l
Bornyl Acetate	2.00	Nom'l
Bromstrol	5.00	Nom'l
Butyl Acetate	.11@	.14 1/2
Cinnamic Acid	3.75@	4.50
Cinnamic Alcohol	3.25@	4.00
Cinnamic Aldehyde	1.65@	1.75
Cinnamyl Acetate	10.40	Nom'l
Cinnamyl Butyrate	12.00@	14.00
Cinnamyl Formate	10.00@	13.00
Citral, C. P.	3.75@	4.15

Citronellol	6.25@	6.85
Citronellyl Acetate	4.00	Nom'l
Coumarin	3.00@	3.50
Cuminic Aldehyde	8.00@	11.25
Diethylphthalate	.24@	.33
Dimethyl Anthranilate	4.55@	5.00
Ethyl Acetate	.25@	.50
Ethyl Anthranilate	5.75@	7.50
Ethyl Benzoate	.90@	1.15
Ethyl Butyrate	.75@	.90
Ethyl Cinnamate	3.60@	4.50
Ethyl Formate	.60@	1.00
Ethyl Propionate	.80	Nom'l
Ethyl Salicylate	.90@	1.00
Ethyl Vanillin	6.50@	6.75
Eucalyptol	2.85@	3.00
Eugenol	2.85@	3.35
Geraniol, dom.	3.00@	3.85
Geranyl Acetate	3.50@	4.00
Geranyl Butyrate	4.00@	5.75
Geranyl Formate	4.25@	6.25
Heliotropin, dom.	3.40@	4.00
Hydrotopic Aldehyde	15.00@	18.00
Hydroxycitronellal	7.75@	10.00
Indol, C. P.	27.00@	32.00
Iso-borneol	1.10@	2.00
Iso-butyl Acetate	1.25@	2.00
Iso-butyl Benzoate	2.75@	3.00
Iso-butyl Salicylate	2.70	Nom'l
Iso-eugenol	4.00@	4.85
Iso-safrol	3.00	Nom'l
Linalool	7.50@	8.00
Linalyl Acetate 90%	7.50@	10.00
Linalyl Anthranilate	15.00@	
Linalyl Benzoate	10.50@	
Linalyl Formate	9.00@	12.00
Menthhol, Japan	16.00	Nom'l
Chinese	16.00	Nom'l
Synthetic	15.75	Nom'l
Methyl Acetophenone	1.60@	2.00
Methyl Anthranilate	2.80@	3.00
Methyl Benzoate	.70@	1.10
Methyl Cellulose, f.o.b. shipping point	.60	Nom'l
Methyl Cinnamate	3.50@	4.00
Methyl Eugenol	3.50@	6.75
Methyl Heptenone	3.25@	
Methyl Heptene Carbonate	45.00	Nom'l
Methyl Iso-eugenol	5.85@	10.00
Methyl Octine Carbonate	24.00@	30.00
Methyl Paracresol	2.50	Nom'l
Methyl Phenylacetate	3.50@	4.00
Methyl Salicylate	.35@	.38
Musk Ambrette	4.25@	9.00
Ketone	4.40@	9.70
Xylene	1.65@	2.50
Neroline (ethyl ether)	2.00@	3.15
Paracresol Acetate	2.50	Nom'l
Paracresol Methyl Ether	2.60@	3.50
Paracresol Phenyl-acetate	6.50@	8.50
Phenylacetaldehyde 50%	3.00@	3.75
100%	4.50@	5.00
Phenylacetic Acid	3.25@	3.70
Phenylethyl Acetate	3.85@	5.00
Phenylethyl Alcohol	2.50@	3.00
Phenylethyl Anthranilate	16.00@	
Phenylethyl Butyrate	6.50@	10.00
Phenylethyl Propionate	5.00@	6.50
Phenyl Formate	12.50@	18.00
Phenyl Valerianate	16.00@	17.50
Phenylpropyl Acet.	10.00	Nom'l
Santalyl Acetate	20.00@	22.50
Skatol, C. P. (oz.)	5.35@	6.00
Styralyl Acetate	2.50@	3.00
Styralyl Alcohol	9.25@	12.00
Terpineol, C. P.	.50@	.75
Terpinyl Acetate	.90@	1.00
Thymene	.45@	
Thymol	2.25@	5.25

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(Continued from p. 89)

Vanillin (clove oil)	2.60	Nom'l
(guaiacol)	2.35	Nom'l
Lignin	2.35	Nom'l
Vetivert Acetate	25.00	Nom'l
Violet Ketone Alpha	18.00	Nom'l
Beta	15.00	Nom'l
Methyl	6.50	Nom'l
Yara Yara (methyl ester)	1.95@	2.25

BEANS

Angostura	2.50@	3.00
Tonka Beans, Surinam	.70@	.95
Vanilla Beans		
Mexican, whole	9.00@	9.50
Mexican, cut	8.25@	8.50
Bourbon, whole	8.50@	9.00
South American	9.50@	10.00
Tahiti	4.00@	4.25

SUNDRIES AND DRUGS

Acetone	.81/2@	.09
Almond meal	.25@	.27
Ambergris, ounce	17.00@	20.00
Ambrette seed	.18@	
Balsam, Copaiba	.50@	.54
Peru	1.30@	1.50
Beeswax, bleached, pure		
U. S. P.	.57	Nom'l
Yellow, refined	.521/2	Nom'l
Bismuth, sub-nitrate	1.20@	1.22
Borax, crystals, carlot ton	55.50@	58.00
Boric Acid, U. S. P., cwt.	6.95@	7.55
Calamine	.18@	.20
Calcium, phosphate	.08@	.083/4
Phosphate, tri-basic	.09@	.10
Camphor, domestic	.68@	.83
Castoreum	13.00@	26.00

Cetyl Alcohol	1.75	Nom'l
Pure	2.25	Nom'l
Chalk, precip.	.031/2@	.061/2
Cherry Laurel Water, carboy	5.75@	6.25
Citric Acid	.21	Nom'l
Civet, ounce	28.00@	49.00
Clay, colloidal	.07@	.15
Cocoa Butter, lump	.251/2@	.27
Sumatra	.30@	.50
Cyclohexanol (Hexalin)	15.00@	33.00
Fuller's Earth, ton	.181/4@	.183/4
Glycerine, C. P., drums	.42@	.45
Gum Arabic, white	.171/2@	.18
Amber	4.00@	4.25
Gum Benzoin, Siam	.60@	.65
Sumatra	1.80@	2.00
Gum Galbanum	.60@	.65
Gum Myrrh	.30@	.35
Henna, pwd.	.05@	.07
Kaolin	3.25@	5.00
Labdanum	.35@	.36
Lanolin, hydrous	.36@	.37
Anhydrous	.09@	.103/4
Magnesium, carbonate	.24@	.27
Stearate	50.00	Nom'l
Musk, ounce	.25@	.30
Olibanum, tears	.11@	.13
Siftings	2.00@	2.50
Orange Flower Water, gal.	1.05@	1.20
Orris Root, African, pwd.	.061/4@	.09
Paraffin	1.10@	1.75
Peroxide	.061/4@	.081/2
Petrolatum, white	1.75@	2.00
Quince Seed	.09@	.10
Rice Starch	5.45@	5.75
Rose Leaves, red	6.50@	8.00
Rose Water, gal.	4.33@	
Rosin M. per cwt.	.35@	.40
Salicylic Acid	2.00@	2.50
Saponin		

Silicate, 40°, drums, works,		
100 pounds	.80@	1.20
Soap, neutral, white	.20@	.25
Sodium Carb.		
58% light, 100 pounds	1.35@	2.35
Hydroxide, 76% solid, 100		
pounds	2.60@	3.75
Spermaceti	.26@	.27
Stearate Zinc	.30@	.31
Styrax	1.85@	2.25
Tartaric Acid	.64	Nom'l
Tragacanth, No. 1	4.25@	4.50
Triethanolamine	.341/2	Nom'l
Violet Flowers	1.75@	2.00
Zinc Oxide, U. S. P. bbls.	.101/2@	.103/4

OILS AND FATS

Castor No. 1, tanks	.13@	
Cocoonut, Manila Grade,		
c.i.f., tanks	.0835@	
Corn, crude, Midwest, mill,		
tanks	.123/4@	
Corn Oil, distilled, bbls.	.151/2	Nom'l
Cotton, crude, Southeast,		
tanks	.123/4@	
Grease, white	.087/8@	
Lard	.1380@	
Lard Oil, common, No. 1		
bbls.	.14@	
Palm, Niger, drums	.087/4@	
Peanut, refined, barrels	.161/2	Nom'l
Red Oil, distilled, tanks	.121/2@	
Stearic Acid		
Triple Pressed	.185/8@	.193/8
Double Pressed	.157/8@	.167/8
Tallow, acidless, barrels	.141/4@	
Tallow, N. Y. C., extra	.087/8@	
Whale oil, refined	.1232@	



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